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APPENDIX D, VOL. I



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**Duct Protection Coating Concept
Development and Test**

**Appendix D, Volume I: Test Specimen Fabrication,
Conditioning, and Testing Documentation**

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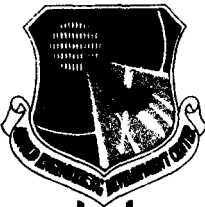
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Final Report for February 1992

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**ARNOLD ENGINEERING DEVELOPMENT CENTER
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APPROVAL STATEMENT

This report has been reviewed and approved.



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Approved for publication:

FOR THE COMMANDER



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13. ABSTRACT (Maximum 200 words) The overall objective of the program was to develop and test a surface cleaning/preparation and corrosion resistant protective polymer coating for the interior of the AEDC Environment Test Facility ferrous metal air supply ducts. The types of cleaning techniques acceptable to the AEDC were basically limited to chemical approaches. Typically, sand or abrasive blasting is used to produce corrosion-free, clean surfaces for coating steel substrates. These particular techniques are strongly discouraged and basically "outlawed" at the AEDC facilities. Water blasting is an acceptable technique, but requires a high pressure water stream, expensive equipment, and considerable clean up.				
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**DUCT PROTECTION COATING CONCEPT
DEVELOPMENT AND TEST**

CONTRACT: F40600-89-C-0002

FINAL TECHNICAL REPORT (CDRL A002)

**APPENDIX D: TEST SPECIMEN FABRICATION, CONDITIONING,
AND TESTING DOCUMENTATION**

PART I: SETS 11 Through I-21

15 February 1992

Submitted to:

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MRC Fabrication/Conditioning/Test Form 90-1

Set: 11 Sample: 4701 Comments:

Materials: A516-70 steel substrate, MEK, Original MARB (20 gm SR 240, 20 gm DC 6-2230, 20 gm Xylene, 0.08 gm 8% Z0, 14.8 gm Aluminum Powder).

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
01/29/90	Solvent Wipe	-	MEK (Mill scale not removed)
	Coat with MARB	-	Brush on; 5 mils
	2 hr @ 487	O	Cure
	Test (Location 15)	A	>950 psi (No Failure)
	Test (Location 16)	A	>950 psi (No Failure)
05/29/90	2 hr @ 150	H	Humid/Dry
05/30/90	1 hr @ 600	O	Dry
05/30/90	Test (Location 17)	A	>800 psi (90% F)
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	
06/01/90	20 min @ +25	H	Center of Panel Blistered
06/01/90	Test (Location 18)	A	>1000 psi
06/04/90	3 hr @ 600	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 11 Sample: 4701 Comments: Page 2

Materials: A516-70 steel substrate, MEK, Original MARB (20 gm SR 240, 20 gm DC 6-2230, 20 gm Xylene, 0.08 gm 8% ZO, 14.8 gm Aluminum Powder).

Equip Definitions: O - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester

Date	Action	Equip	Results/Comments
06/04/90	0.5 hr @ -100	C	
06/05/90	4 hr @ 160	H	High Humidity; Paint Peeling
06/05/90	Test (Location 19)	A	990 psi (45% F, 50% C, 5% A)
06/14/90	4 hr @ 600	O	Dry Heat
06/15/90	1 hr @ 150	H	
06/15/90	30 min @ 15	H	Dry to Very Humid
6/15/90	1 hr @ 150	H	Very Humid to Dry (Flaking - complete coating failure) 12 events

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13 Sample: 5002-Top Comments: 1 Dot

Materials: 50% HCl Acid; Zinc Clad II (West Mix)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
03/30/90	Clean with acid		
03/30/90	Wire Brush		
03/30/90	Apply ZnClad II		
04/05/90	2 hr @ 610	O	
04/09/90	Test (Location 2)	A	750 psi (A)
04/09/90	1 hr @ 645		
04/10/90	12 hr @ -110	B	
04/11/90	2 hr @ 645	O	
04/12/90	2 hr @ 683	O	
04/13/90	2 hr @ 675	O	
04/16/90	12 hr @ -110	B	
04/17/90	2 hr @ 650	O	
04/23/90	2 hr @ 650	O	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13

Sample: 5002-Top

Comments: Page 2

Materials: 50% HCl Acid; Zinc Clad II (West Mix)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
04/26/90	Test (Location 3)	A	>900 psi (No Failure), No Flaking Observed
04/27/90	2 hr @ 650	O	
05/01/90	2 hr @ 650	O	
05/02/90	2 hr @ 650	O	
05/09/90	Test (Location 4)	A	20 psi (100% C)
05/11/90	Test (Location 5)	A	90 psi (95% C, 5% F)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13 Sample: 5002-Bottom Comments: 1 Dot

Materials: 50% HCl Acid; Zinc Clad II (West Mix); Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
03/30/90	Clean with acid		
03/30/90	Wire Brush		
03/30/90	Apply ZnClad II		Brush
03/30/90	Apply MARB		Brush
04/04/90	Test (location 1)	A	Cohesive Failure in Paint while Scribing
04/05/90	2 hr @ 615	O	
04/09/90	Test (Location 2)	A	>900 psi (No Failure)
04/09/90	1 hr @ 645		
04/10/90	12 hr @ -110	B	
04/11/90	2 hr @ 645	O	
04/12/90	2 hr @ 683	O	
04/13/90	2 hr @ 675	O	
04/16/90	12 hr @ -110	B	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13 Sample: 5002-Bottom Comments: Page 2

Materials: 50% HCl Acid; Zinc Clad II (West Mix); Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
04/17/90	2 hr @ 650	O	
04/23/90	2 hr @ 650	O	
04/26/90	Test (Location 3)	A	>900 psi (No Failure)
04/27/90	2 hr @ 650	O	
05/01/90	2 hr @ 650	O	
05/02/90	2 hr @ 650	O	
05/09/90	Test (Location 4)	A	150 psi (60% C, 40% ZnClad II)
05/11/90	Test (Location 5)	A	100 psi (95% C - Zn/MALB Interface, 5% C - MALB)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13 Sample: 5003-Top Comments: 2 Dot

Materials: MEK; Zinc Clad II (West Mix); Standard MARB

Equip Definitions: O - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester

Date	Action	Equip	Results/Comments
03/30/90	Detergent Wash		
03/30/90	Wipe with MEK		
03/30/90	Apply ZnClad II		Brush
03/30/90	Apply MARB		Brush
04/04/90	Test (location 1)	A	20 psi (100% C)
04/05/90	2 hr @ 615	O	
04/09/90	Test (Location 2)	A	580 psi (100% Epoxy Failure)
04/09/90	1 hr @ 645		
04/10/90	12 hr @ -110	B	
04/11/90	2 hr @ 645	O	
04/12/90	2 hr @ 683	O	
04/13/90	2 hr @ 675	O	
04/16/90	12 hr @ -110	B	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13 Sample: 5003-Top Comments: Page 2

Materials: MEK; Zinc Clad II (West Mix); Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
04/17/90	2 hr @ 650	O	
04/23/90	2 hr @ 650	O	
04/26/90	Test (Location 3)	A	400 psi (100% ZnII/Substrate)
04/27/90	2 hr @ 650	O	
05/01/90	2 hr @ 650	O	
05/02/90	2 hr @ 650	O	
05/09/90	Test (Location 4)	A	50 psi (60% ZnClad II, 40% C)
05/11/90	Test (Location 5)	A	<10 psi (100% C - Failed Very Early)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13 Sample: 5003-Bottom Comments: 2 Dots

Materials: MEK; Zinc Clad II (West Mix)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
03/30/90	Detergent Wash		
03/30/90	Wipe with MEK		
03/30/90	Apply ZnClad II		
04/05/90	2 hr @ 615	O	
04/09/90	Test (Location 2)	A	200 psi (100% A)
04/09/90	1 hr @ 645		
04/10/90	12 hr @ -110	B	
04/11/90	2 hr @ 645	O	
04/12/90	2 hr @ 683	O	
04/13/90	2 hr @ 675	O	
04/16/90	12 hr @ -110	B	
04/17/90	2 hr @ 650	O	
04/23/90	2 hr @ 650	O	
04/26/90	Test (Location 3)	A	820 psi (100% A), Zinc Clad is Flaking

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13 Sample: 5003-Bottom Comments: Page 2

Materials: MEK; Zinc Clad II (West Mix)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
04/27/90	2 hr @ 650	O	
05/01/90	2 hr @ 650	O	
05/02/90	2 hr @ 650	O	
05/09/90	Test (Location 4)	A	210 psi (85% ZnII, 15% C)
05/11/90	Test (Location 5)	A	110 psi (40% Substrate, 60% C)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13

Sample: 5102

Comments: 3 Dot

Materials: 50% HCl Acid; Zinc Clad II (West Mix); Sherwin-Williams Hi Heat Spray Enamel

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
03/30/90	Clean with Acid		
03/30/90	Wire Brush		
03/30/90	Apply ZnClad II		Brush
03/30/90	Apply S/W Paint		Spray
04/04/90	Test (location 1)	A	90 psi (100% C in Aluminum Paint)
04/05/90	2 hr @ 615	O	
04/09/90	Test (Location 2)	A	150 psi (100% C in Zinc Clad)
04/09/90	1 hr @ 645		
04/10/90	12 hr @ -110	B	
04/11/90	2 hr @ 645	O	
04/12/90	2 hr @ 683	O	
04/13/90	2 hr @ 675	O	
04/16/90	12 hr @ -110	B	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13

Sample: 5102

Comments: Page 2

Materials: 50% HCl Acid; Zinc Clad II (West Mix); Sherwin-Williams Hi Heat Spray Enamel

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
04/17/90	2 hr @ 650	O	
04/23/90	2 hr @ 650	O	
04/26/90	Test (Location 3)	A	0 psi (Came off while Scribing - 30% C in Zinc Clad, 70% Paint/Zinc Clad)
04/27/90	2 hr @ 650	O	
05/01/90	2 hr @ 650	O	
05/02/90	2 hr @ 650	O	
05/09/90	Test (Location 4)	A	<20 psi (100% Epoxy Failure)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13

Sample: 5103

Comments: 4 Dot

Materials: MEK; Zinc Clad II (West Mix); Sherwin-Williams Hi Heat Spray Enamel

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
03/30/90	Detergent Wash		
03/30/90	Wipe with MEK		
03/30/90	Apply ZnClad II		Brush
03/30/90	Apply S/W Paint		Spray
04/04/90	Test (location 1)	A	50 psi (100% C in Paint)
04/05/90	2 hr @ 615	O	
04/09/90	Test (Location 2)	A	75 psi (60% C in Zinc Clad, 40% Paint/Zinc Clad Interface)
04/09/90	1 hr @ 645		
04/10/90	12 hr @ -110	B	
04/11/90	2 hr @ 645	O	
04/12/90	2 hr @ 683	O	
04/13/90	2 hr @ 675	O	
04/16/90	12 hr @ -110	B	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13

Sample: 5103

Comments: Page 2

Materials: 50% HCl Acid; Zinc Clad II (West Mix); Sherwin-Williams Hi Heat Spray Enamel

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
04/17/90	2 hr @ 650	O	
04/23/90	2 hr @ 650	O	
04/26/90	Test (Location 3)	A	0 psi (100% Adhesion ZnII to Steel)
04/27/90	2 hr @ 650	O	
05/01/90	2 hr @ 650	O	
05/02/90	2 hr @ 650	O	
05/09/90	Test (Location 4)	A	<20 psi (90% C to ZnII, 10% C in ZnII)
	Test (Location 5)	A	100% Epoxy Failure

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13

Sample: 5202

Comments: 5 Dot

Materials: 50% HCl Acid; Zinc Clad I

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
03/30/90	Clean with acid		
03/30/90	Wire Brush		
03/30/90	Apply ZnClad I		
04/04/90	Test (Location 1)	A	100 psi (100% A)
04/05/90	2 hr @ 615	O	
04/09/90	Test (Location 2)	A	200 psi (100% C)
04/09/90	1 hr @ 645		
04/10/90	12 hr @ -110	B	
04/11/90	2 hr @ 645	O	
04/12/90	2 hr @ 683	O	
04/13/90	2 hr @ 675	O	
04/16/90	12 hr @ -110	B	
04/17/90	2 hr @ 650	O	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13

Sample: 5202

Comments: Page 2

Materials: 50% HCl Acid; Zinc Clad I

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
04/23/90	2 hr @ 650	O	
04/26/90	Test (Location 3)	A	90 psi (100% C)
04/27/90	2 hr @ 650	O	
05/01/90	2 hr @ 650	O	
05/02/90	2 hr @ 650	O	
05/09/90	Test (Location 4)	A	200 psi (60% C, 40% A)
05/11/90	Test (Location 5)	A	900 psi (No Failure)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13 Sample: 5203

Comments: 6 Dot

Materials: MEK; Zinc Clad I

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
03/30/90	Detergent Wash		
03/30/90	Wipe with MEK		
03/30/90	Apply ZnClad I		
04/04/90	Test (Location 1)	A	10 psi (100% A)
04/05/90	2 hr @ 615	O	
04/09/90	Test (Location 2)	A	75 psi (100% A)
04/09/90	1 hr @ 645		
04/10/90	12 hr @ -110	B	
04/11/90	2 hr @ 645	O	
04/12/90	2 hr @ 683	O	
04/13/90	2 hr @ 675	O	
04/16/90	12 hr @ -110	B	
04/17/90	2 hr @ 650	O	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13 Sample: 5203

Comments: Page 2

Materials: MEK; Zinc Clad I

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
04/23/90	2 hr @ 650	O	
04/26/90	Test (Location 3)	A	220 psi (100% A - Subsurface Corrosion Visible, Lots of Flaking)
04/27/90	2 hr @ 650	O	
05/01/90	2 hr @ 650	O	
05/02/90	2 hr @ 650	O	
05/09/90	Test (Location 4)	A	700 psi (60% C, 40% A)
05/11/90	Test (Location 5)	A	400 psi (85% A, 10% C, 5% Epoxy)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13

Sample: 5302

Comments: 7 Dot

Materials: 50% HCl Acid; Nybco Bar-B-Q Black

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
03/30/90	Clean with acid		
03/30/90	Wire Brush		
03/30/90	Apply Bar-B-Q Black		Spray
04/04/90	Test (Location 1)	A	100 psi (50% A, 50% C)
04/05/90	2 hr @ 615	O	
04/09/90	Test (Location 2)	A	800 psi (100% C)
04/09/90	1 hr @ 645		
04/10/90	12 hr @ -110	B	
04/11/90	2 hr @ 645	O	
04/12/90	2 hr @ 683	O	
04/13/90	2 hr @ 675	O	
04/16/90	12 hr @ -110	B	
04/17/90	2 hr @ 650	O	

NRC Fabrication/Conditioning/Test Form 90-1

Set: 13

Sample: 5302

Comments: Page 2

Materials: 50% HCl Acid; Bar-B-Q Black

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
04/23/90	2 hr @ 650	O	
04/26/90	Test (Location 3)	A	300 psi (100% C)
04/27/90	2 hr @ 650	O	
05/01/90	2 hr @ 650	O	
05/02/90	2 hr @ 650	O	
05/09/90	Test (Location 4)	A	>900 psi (No Failure)
05/11/90	Test (Location 5)	A	850 psi (75% C, 25% Epoxy)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13

Sample: 5303

Comments: 8 Dot

Materials: MEK; Nybco Bar-B-Q Black

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
03/30/90	Detergent Wash		
03/30/90	Wipe with MEK		
03/30/90	Apply Bar-B-Q Black		Spray
04/04/90	Test (Location 1)	A	200 psi (67% A, 33% Epoxy)
04/05/90	2 hr @ 615	O	
04/09/90	Test (Location 2)	A	>900 psi (No Failure)
04/09/90	1 hr @ 645		
04/10/90	12 hr @ -110	B	
04/11/90	2 hr @ 645	O	
04/12/90	2 hr @ 683	O	
04/13/90	2 hr @ 675	O	
04/16/90	12 hr @ -110	B	
04/17/90	2 hr @ 650	O	

NRC Fabrication/Conditioning/Test Form 90-1

Set: 13 Sample: 5303

Comments: Page 2

Materials: MEK; Bar-B-Q Black

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
04/23/90	2 hr @ 650	O	
04/26/90	Test (Location 3)	A	200 psi (90% C, 10% A)
04/27/90	2 hr @ 650	O	
05/01/90	2 hr @ 650	O	
05/02/90	2 hr @ 650	O	
05/09/90	Test (Location 4)	A	200 psi (100% C)
05/11/90	Test (Location 5)	A	500 psi (95% A, 5% Epoxy)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13 Sample: 5402 Comments: 9 Dot
Materials: 50% HCl Acid; Sherwin-Williams Hi-Heat Spray Enamel

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
03/30/90	Clean with acid		
03/30/90	Wire Brush		
03/30/90	Apply S/W Paint		Spray
04/04/90	Test (Location 1)	A	50 psi (50% A, 50% C)
04/05/90	2 hr @ 615	O	
04/09/90	Test (Location 2)	A	600 psi (100% C)
04/09/90	1 hr @ 645		
04/10/90	12 hr @ -110	B	
04/11/90	2 hr @ 645	O	
04/12/90	2 hr @ 683	O	
04/13/90	2 hr @ 675	O	
04/16/90	12 hr @ -110	B	
04/17/90	2 hr @ 650	O	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13

Sample: 5402

Comments: Page 2

Materials: 50% HCl Acid; Sherwin-Williams HI-Heat Spray Enamel

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
04/23/90	2 hr @ 650	O	
04/26/90	Test (Location 3)	A	600 psi (100% C)
04/27/90	2 hr @ 650	O	
05/01/90	2 hr @ 650	O	
05/02/90	2 hr @ 650	O	
05/09/90	Test (Location 4)	A	250 psi (100% C)
05/11/90	Test (Location 5)	A	200 psi (100% C)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13 Sample: 5403 Comments: 10 Dot

Materials: MEK; Sherwin-Williams Hi-Heat Spray Enamel

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
03/30/90	Detergent Wash		
03/30/90	Wipe with MEK		
03/30/90	Apply S/W Paint		Spray
04/04/90	Test (Location 1)	A	5 psi (100% C)
04/05/90	2 hr @ 615	O	
04/09/90	Test (Location 2)	A	600 psi (100% C)
04/09/90	1 hr @ 645		
04/10/90	12 hr @ -110	B	
04/11/90	2 hr @ 645	O	
04/12/90	2 hr @ 683	O	
04/13/90	2 hr @ 675	O	
04/16/90	12 hr @ -110	B	
04/17/90	2 hr @ 650	O	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13

Sample: 5403

Comments: Page 2

Materials: MEK; Sherwin-Williams Hi-Heat Spray Enamel

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
04/23/90	2 hr @ 650	O	
04/26/90	Test (Location 3)	A	400 psi (95% C, 5% A)
04/27/90	2 hr @ 650	O	
05/01/90	2 hr @ 650	O	
05/02/90	2 hr @ 650	O	
05/09/90	Test (Location 4)	A	190 psi (40% C, 60% A)
05/11/90	Test (Location 5)	A	50 psi (20% A, 80% C)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13

Sample: 5501

Comments: 11 Dots

Materials: 50% HCl Acid; Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
03/30/90	Clean with acid		
03/30/90	Wire Brush		
03/30/90	Apply MARB Paint	Brush	
	Clean With Phosphoric Acid		Coating cannot be removed
06/08/90	Test (Location 1)	A	>1000 psi (No Failure)
06/13/90	3.5 hr @ 140	H	
06/14/90	Test (Location 1)	A	>1000 psi (No Failure - Knock Dolly off with Hammer)
06/14/90	4 hr @ 600	C	
06/15/90	7 hr @ 15 - 150	H	High Humidity
06/18/90	Test (Location 2)	A	>1050 psi (No Failure)
06/18/90	30 min @ -100	C	
06/18/90	1 hr @ 600	C	
06/18/90	30 min @ -100	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13

Sample: 5501

Comments: Page 2

Materials: 50% HCl Acid; Standard MARB

Equip Definitions: O - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester; B - Bath

Date	Action	Equip	Results/Comments
06/19/90	6 hr @ 120	H	High Humidity
06/20/90	6 hr @ 120	H	High Humidity

NRC Fabrication/Conditioning/Test Form 90-1

Set: 13 Sample: 5502 Comments: 11 Dots

Materials: 50% HCl Acid; Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
03/30/90	Clean with acid		
03/30/90	Wire Brush		
03/30/90	Apply MARB Paint		Brush
04/04/90	Test (Location 1)	A	0 psi (Cohesive Failure while Scribing)
04/05/90	2 hr @ 615	O	
04/09/90	Test (Location 2)	A	>900 psi (No Failure)
04/09/90	1 hr @ 645		
04/10/90	12 hr @ -110	B	
04/11/90	2 hr @ 645	O	
04/12/90	2 hr @ 683	O	
04/13/90	2 hr @ 675	O	
04/16/90	12 hr @ -110	B	
04/17/90	2 hr @ 650	O	

NRC Fabrication/Conditioning/Test Form 90-1

Set: 13

Sample: 5502

Comments: Page 2

Materials: 50% HCl Acid; Standard MARB

Equip Definitions: O - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester; B - Bath

Date	Action	Equip	Results/Comments
04/23/90	2 hr @ 650	O	
04/26/90	Test (Location 3)	A	300 psi (100% C)
04/27/90	2 hr @ 650	O	
05/01/90	2 hr @ 650	O	
05/02/90	2 hr @ 650	O	
05/09/90	Test (Location 4)	A	690 psi (90% C, 10% A)
05/11/90	Test (Location 5)	A	700 psi (75% C, 20% A, 5% Epoxy)
07/12/90	15 min @ -300	C	Extreme Cold (Mistake)
07/12/90	1 hr @ -100	C	
07/12/90	16 hrs @ 130	H	Humid
07/13/90	2 hrs @ 620	O	Hot, Dry
07/13/90	17 hrs @ 135	H	Humid
07/16/90	Test (Location 6)	A	>450 psi (70% Epoxy Failure - Bad Data)
07/16/90	4 hrs @ 620	O	Hot, Dry

NRC Fabrication/Conditioning/Test Form 91-1

Set-Sample: 13 - 5502 Comments: Page 3

Materials: 50% HCL acid; Standard MARB

Equip Definitions: See Page 1

Date	Action	Equip	Results/Comments
07/19/90	Test (Location 7)	A	
07/25/90	20 hrs @ 130	H	Wet to dry
07/26/90	0.5 hrs @ 0	H	Humid
07/26/90	19 hrs @ 130	H	High humidity
07/27/90	0.5 hrs @ 10	H	
07/27/90	24 hrs @ 130 F	H	
07/30/90	Test (Location 8)	A	1050

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13 Sample: 5503

Comments: 12 Dot

Materials: MEK; Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
03/30/90	Detergent Wash		
03/30/90	Wipe with MEK		
03/30/90	Apply MARB Paint	Brush	
04/04/90	Test (Location 1)	A	0 psi (Cohesive Failure while Scribing)
04/05/90	2 hr @ 615	O	
04/09/90	Test (Location 2)	A	850 psi (50% C, 50% A)
04/09/90	1 hr @ 645		
04/10/90	12 hr @ -110	B	
04/11/90	2 hr @ 645	O	
04/12/90	2 hr @ 683	O	
04/13/90	2 hr @ 675	O	
04/16/90	12 hr @ -110	B	
04/17/90	2 hr @ 650	O	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 13 Sample: 5503

Comments: Page 2

Materials: MEK; Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester; B = Bath

Date	Action	Equip	Results/Comments
04/23/90	2 hr @ 650	O	
04/26/90	Test (Location 3)	A	320 psi (95% C, 5% A)
04/27/90	2 hr @ 650	O	
05/01/90	2 hr @ 650	O	
05/02/90	2 hr @ 650	O	
05/09/90	Test (Location 4)	A	850 psi (100% C)
05/11/90	Test (Location 5)	A	250 psi (45% Epoxy, 55% A)
06/26/90	Sent to AEDC		

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6701-TL(A) Comments:

Materials: Kano X-Rust Liquid, Brulin 835 Inhibitor, MZRB27

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/18/90	Clean with X-Rust		Soak 1 hr
05/18/90	Coat with Brulin 835		Brush
05/18/90	Coat with MZRB27		Brush
05/18/90	0.5 hr @ 200	O	Cure Cycle
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	
06/08/90	Test (Location 5)	A	350 psi (12% Epoxy, 73% A Brulin/Steel, 15% A Rust/Steel)
06/13/90	3.5 hr @ 140	H	
06/15/90	30 min @ 150	H	
06/15/90	30 min @ 15	H	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6701-TL(A) Comments: Page 2

Materials: Kano X-Rust Liquid, Brulin 835 Inhibitor, MZRB27

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/15/90	30 min @ 150	H	
06/18/90	Test (Location 7)	A	510 psi (85% Epoxy, 15% Cohesive)
06/18/90	3 hr @ 600	O	
06/19/90	6 hr @ 120	H	85-98% RH (No Coating Failures)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6701-TR(B) Comments:

Materials: Kano X-Rust Liquid, Sharp 104 Inhibitor, MZRB27

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/18/90	Clean with X-Rust		Soak 1 hr
05/18/90	Coat with Sharp 104		Brush
05/18/90	Coat with MZRB27		Brush
05/18/90	0.5 hr @ 200	O	Cure Cycle
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	
06/08/90	Test (Location 6)	A	250 psi (5% Epoxy, 65% Brulin/Steel, 30% Rust/Steel)
06/13/90	3.5 hr @ 140	H	
06/15/90	30 min @ 150	H	
06/15/90	30 min @ 15	H	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6701-TR(B) Comments: Page 2

Materials: Kano X-Rust Liquid, Sharp 104 Inhibitor, MZRB27

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/15/90	30 min @ 150	H	
06/18/90	3 hr @ 600	O	Coating Failure
06/19/90	6 hr @ 120	H	85-98% RH

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6701-BR(C) Comments:

Materials: Kano X-Rust Liquid, Sharp 104 Inhibitor, MZRB40

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/18/90	Clean with X-Rust		Soak 1 hr
05/18/90	Coat with Sharp 104		Brush
05/18/90	Coat with MZRB40		Brush
05/18/90	0.5 hr @ 200	O	Cure Cycle
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	Test (Location 2)	A	>950 psi (No Failure)
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	Test (Location 3)	A	350 psi (40% Epoxy, 50% Sharp/Steel, 15% Rust/Steel)
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ +25	H	
06/08/90	Test (Location 3A?)	A	250 psi (85% Substrate, 5% Rust, 10% Epoxy Failure)
06/08/90	Test (Location 4)	A	200 psi (40% Epoxy, 60% Substrate - No Rust)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6701-BR(C) Comments: Page 2

Materials: Kano X-Rust Liquid, Sharp 104 Inhibitor, MZRB40

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Test (Location 5)	A	350% (12% Epoxy, 73% Adhesion, 15% Adhesion -Rust)
06/13/90	3.5 hr @ 140	H	
06/15/90	30 min @ 150	H	Coating Failure
06/15/90	30 min @ 15	H	Coating Failure
06/15/90	30 min @ 150	H	Coating Failure
06/18/90	3 hr @ 600	O	Coating Failure
06/19/90	6 hr @ 120	H	85-98% RH

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6701-BL(D) Comments:

Materials: Kano X-Rust Liquid, Brulin 805 Inhibitor, MZRB40

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/18/90	Clean with X-Rust		Soak 1 hr
05/18/90	Coat with Brulin 835		Brush
05/18/90	Coat with MZRB40		Brush
05/18/90	0.5 hr @ 200	O	Cure Cycle
05/24/90	Test (Location 1)	A	350 psi (20% Epoxy, 50% Brulin/Steel, 30% C in Paint)
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	
06/08/90	Test (Location 6)	A	200 psi (40% Epoxy, 60% A Brulin/Steel) No Rust on Substrate
06/13/90	3.5 hr @ 140	H	
06/15/90	30 min 150	H	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6701-BL(D) Comments: Page 2

Materials: Kano X-Rust Liquid, Brulin 805 Inhibitor, MZRB40

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Coating Failure
06/18/90	3 hr @ 600	O	
06/19/90	6 hr @ 120	H	85-98% RH

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6702-TL(A) Comments:

Materials: VSI-421 Cleaner, Brulin 835 Inhibitor, Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/18/90	Clean with VSA-421		
05/18/90	Wire Brush		
05/18/90	Wipe with MEK		
05/18/90	Coat with Brulin 835		Brush
05/18/90	Coat with MARB		Brush
05/18/90	0.5 hr @ 487	O	Cure Cycle
05/24/90	Test (Location 5)	A	>950 psi (No Failure)
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	Test (Location 7)	A	50 psi (90% Epoxy, 10% C) No Test
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ +25	H	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6702-TL(A) Comments: Page 2

Materials: VSI-421 Cleaner, Brulin 835 Inhibitor, Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/05/90	4 hr @ 160	H	Humid

NRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6702-TR(B) Comments:

Materials: VSI-421 Cleaner, Sharp 104 Inhibitor, Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/18/90	Clean with VSA-421		
05/18/90	Wire Brush		
05/18/90	Wipe with MEK		
05/18/90	Coat with Sharp 104		Brush
05/18/90	Coat with MARB		Brush
05/18/90	0.5 hr @ 487	O	Cure Cycle
05/24/90	Test (Location 6)	A	400 psi (50% C, 50% A - Sharp/Steel)
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	
06/05/90	4 hr @ 160	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6702-TR(B) Comments:

Materials: VSI-421 Cleaner, Sharp 104 Inhibitor, Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/06/90	Test (Location 8)	A	850 psi (85% A, 15% C)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6702-BR(C) Comments:

Materials: VSI-421 Cleaner, Sharp 104 Inhibitor

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/18/90	Clean with VSA-421		
05/18/90	Wire Brush		
05/18/90	Wipe with MEK		
05/18/90	Coat with Sharp 104		Brush
05/18/90	0.5 hr @ 487	O	
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ 25	H	
06/05/90	4 hr @ 160	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6702-BL(D) Comments:

Materials: VSI-421 Cleaner, Brulin 835 Inhibitor

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/18/90	Clean with VSA-421		
05/18/90	Wire Brush		
05/18/90	Wipe with MEK		
05/18/90	Coat with Brulin 835	Brush	
05/18/90	0.5 hr @ 487	O	
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	
06/05/90	4 hr @ 160	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6703-TL(A) Comments:

Materials: MEK, Sheffield Pot Belly Black, MARS

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Wipe with MEK		
05/21/90	Glass Bead Blast		
05/21/90	Coat with Pot Belly Black		Brush
05/21/90	Coat with MARS		Brush
05/18/90	2 hr @ 487	O	Cure Cycle
05/24/90	Test (Location 11)	A	>750 psi (Epoxy Failure)
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	Test (Location 13)	A	820 psi (60% Epoxy, 30% Paint Cohesive, 10% C Pot Belly Cohesive)
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ 25	H	
06/04/90	3 hr @ 610	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6703-TL(A) Comments: Page 2

Materials: MEK, Sheffield Pot Belly Black, MARS

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/04/90	30 min @ -100	C	
06/05/90	4 hr @ 160	H	
06/13/90	3.5 hr @ 140	H	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	Humid
06/15/90	30 min @ 150	H	Humid
06/18/90	Test (Location 1)	A	400 psi (90% Epoxy Failure, 10% Coating Cohesive)
06/18/90	3 hr @ 600	O	
06/19/90	6 hr @ 120	H	85-98% RH
06/20/89	Test (Location 16)	A	800 psi (60% Coating Cohesive, 40% Pot Belly Cohesive)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6703-TR(B) Comments:

Materials: MEK, Sheffield Pot Belly Black, MARS

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Wipe with MEK		
05/21/90	Glass Bead Blast		
05/21/90	Coat with Pot Belly Black		Brush
05/21/90	Coat with MARS		Brush
05/18/90	2 hr @ 487	O	Cure Cycle
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	Test (Location 12)	A	>950 psi (90% Pot Belly Interfaces, 10% Paint Cohesive)
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	
06/04/90	3 hr @ 610	C	
06/04/90	30 min @ -100	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6703-TR(B) Comments: Page 2

Materials: MEK, Sheffield Pot Belly Black, MARS

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/05/90	4 hr @ 160	H	
06/06/90	Test (Location 14)	A	400 psi (90% Epoxy Failure) No Test
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	Test (Location 15)	A	>1000 psi (No Failure)
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	Humid
06/15/90	30 min @ 150	H	Humid
06/15/90	Test (Location 15)	A	880 psi (60% Pot Belly Cohesive, 40% Coating Cohesive)
06/18/90	3 hr @ 600	O	
06/19/90	6 hr @ 120	H	85-98% RH

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6703-BR(C) Comments:

Materials: MEK, Brulin 835 Inhibitor

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Wipe with MEK		
05/21/90	Glass Bead Blast		
05/21/90	Coat with Brulin 835	Brush	
05/18/90	0.5 hr @ 487	O	
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	
06/04/90	3 hr @ 610	C	
06/04/90	30 min @ -100	C	
06/05/90	4 hr @ 160	H	
06/13/90	3.5 hr @ 140	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6703-BR(C) Comments: Page 2

Materials: MEK, Brulin 835 Inhibitor

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	Humid
06/15/90	30 min @ 150	H	Humid
06/18/90	3 hr @ 600	O	
06/19/90	6 hr @ 120	H	85-98% RH

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6703-BL(D) Comments:

Materials: MEK, Brulin 835 Inhibitor, MARS

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Wipe with MEK		
05/21/90	Glass Bead Blast		
05/21/90	Coat with Brulin 835		Brush
05/21/90	Coat with MARS		Brush
05/18/90	0.5 hr @ 487	O	Cure Cycle
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	
06/04/90	3 hr @ 610	C	
06/04/90	30 min @ -100	C	
06/05/90	4 hr @ 160	H	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6703-BL(D) Comments: Page 2

Materials: MEK, Brulin 835 Inhibitor, MARS

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/13/90	3.5 hr @ 140	H	Humid
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	Humid
06/15/90	30 min @ 150	H	Humid
06/15/90	Test (Location 2)	A	0 psi (100% Adhesion Failure)
06/18/90	3 hr @ 600	O	
06/19/90	6 hr @ 120	H	85-98% RH

NRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6801-TL(A) Comments:

Materials: X-Rust Cleaner, MEK, Brulin 835 Inhibitor, Sheffield Red Hot Aluminum Paint

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Clean with X-Rust		
05/21/90	Wipe with MEK		
05/21/90	Coat with Brulin 835		Brush
05/21/90	Coat with S/W Red Hot		Brush
05/23/90	Test (Location 2)	A	400 psi (90% Cohesive)
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	Test		No Strength in Coating, No Scrape Resistance

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6801-TR(B) Comments:

Materials: X-Rust Cleaner, MEK, Sharp 104 Inhibitor, Sheffield Red Hot Aluminum Paint

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Clean with X-Rust		
05/21/90	Wipe with MEK		
05/21/90	Coat with Sharp 104		Brush
05/21/90	Coat with S/W Red Hot		Brush
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	Test		No Strength in Coating, No Scrape Resistance

NRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6801-BR(C) Comments:

Materials: X-Rust Cleaner, MEK, Sharp 104 Inhibitor

Equip Definitions: O - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Clean with X-Rust		
05/21/90	Wipe with MEK		
05/21/90	Coat with Sharp 104	Brush	
05/29/90	2 hr @ 150	H	From dry to 100% RH

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6801-BL(D) Comments:

Materials: X-Rust Cleaner, MEK, Brulin 835 Inhibitor

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Clean with X-Rust		
05/21/90	Wipe with MEK		
05/21/90	Coat with Brulin 825	Brush	
05/29/90	2 hr @ 150	H	From dry to 100% RH

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6803-Top(A,B) Comments:

Materials: MEK, Sheffield Pot Belly Black, MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Wipe with MEK		
05/21/90	Glass Bead Blast		
05/21/90	Coat with Pot Belly Black		Brush
05/21/90	Coat with MARB		Brush
05/21/90	2 hr @ 487	O	Cure Cycle
05/23/90	Test (Location 12)	A	>950 psi (No Failure)
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	Test (Location 13)	A	>1000 psi (No Failure)
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	
06/04/90	3 hr @ 610	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6803-Top(A,B) Comments: Page 2

Materials: MEK, Sheffield Pot Belly Black, MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/04/90	30 min @ -100	C	
06/05/90	4 hr @ 160	H	
06/06/90	Test (Location 14)	A	650 psi (45% Pot Belly/Steel, 45% C Pot Belly, 10% C Paint)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6803-BR(C) Comments:

Materials: MEK, Sharp 104 Inhibitor

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Wipe with MEK		
05/21/90	Glass Bead Blast		
05/21/90	Coat with Sharp 104	Brush	
05/21/90	2 hr @ 487	O	
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	
06/04/90	3 hr @ 610	C	
06/04/90	30 min @ -100	C	
06/05/90	4 hr @ 160	H	Rusting

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6803-BL(D) Comments:

Materials: MEK, Sharp 104 Inhibitor, MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Wipe with MEK		
05/21/90	Glass Bead Blast		
05/21/90	Coat with Sharp 104		Brush
05/21/90	Coat with MARB		Brush
05/21/90	2 hr @ 487	O	Cure Cycle
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	
06/04/90	3 hr @ 610	C	
06/04/90	30 min @ -100	C	
06/05/90	4 hr @ 160	H	MARB over 104 Failure

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6901-TL(A) Comments:

Materials: X-Rust Cleaner, MEK, MZRB40, MARS

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Clean with X-Rust		
05/21/90	Glass Bead Blast		
05.21/90	Wipe with MEK		
05/21/90	Coat with MZRB40		Brush
05/21/90	Coat with MARS		Brush
05/21/90	2 hr @ 487	O	Cure Cycle
05/23/90	Test (Location 3)	A	550 psi (60% Substrate, 40% Cohesive)
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	Test (Location 5)	A	>1000 psi (100% Epoxy)
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	Test (Location 6)	A	910 psi (100% Substrate)
06/01/90	3 hr @ 160	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6901-TL(A) Comments: Page 2

Materials: X-Rust Cleaner, MEK, MZRB40, MARS

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/01/90	20 min @ -25	H	
06/04/90	3 hr @ 610	C	
06/04/90	30 min @ -100	C	
06/05/90	4 hr @ 160	H	
06/06/90	Test (Location 7)	A	1000 psi (95% A, 5% C)
06/08/90	Test (Location A)	A	>1000 psi (No Failure)
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	Test (Location A) Repeat	A	1000 psi (100% Adhesion)
06/14/90	4 hr @ 600	C	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	Humid
06/15/90	30 min @ 150	H	Humid
06/18/90	30 min @ -100	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6901-TL(A) Comments: Page 3

Materials: X-Rust Cleaner, MEK, MZRB40, MARS

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/18/90	1 hr @ 600	C	
06/18/90	30 min @ -100	C	
06/19/90	6 hr @ 120	H	85-98% RH
06/20/90	Test (Location 10)	A	>1050 psi (No Failure)
06/20/90	6 hr @ 120	H	85-98% RH
06/21/90	Test (Location 10)	A	1050 psi (100% Adhesion)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6901-TR(B) Comments:

Materials: X-Rust Cleaner, MEK, MZRB40

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Clean with X-Rust		
05/21/90	Glass Bead Blast		
05.21/90	Wipe with MEK		
05/21/90	Coat with MZRB40		Brush
05/21/90	2 hr @ 487	O	Cure Cycle
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	
06/04/90	3 hr @ 610	C	
06/04/90	30 min @ -100	C	
06/05/90	4 hr @ 160	H	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16

Sample: 6901-TR(B)

Comments: Page 2

Materials: X-Rust Cleaner, MEK, MZRB40

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/06/90	Test (Location 8)	A	>600 psi (90% Epoxy Failure) No Test
06/08/90	Test (Location 8)	A	>1050 psi (95% Epoxy Failure)
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	4 hr @ 600	C	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	Humid
06/15/90	30 min @ 150	H	Humid
06/18/90	Test (Location 9)	A	>1050 psi (No Failure)
06/18/90	30 min @ -100	C	
06/18/90	1 hr @ 600	C	
06/18/90	30 min @ -100	C	
06/19/90	6 hr @ 120	H	85-98% RH
06/20/90	6 hr @ 120	H	85-98% RH

NRC Fabrication/Conditioning/Test Form 90-1

Set: 16

Sample: 6901-BR(C)

Comments:

Materials: X-Rust Cleaner, MEK, Brulin 835 Inhibitor, MZRB40, MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Clean with X-Rust		
05/21/90	Glass Bead Blast		
05/21/90	Wipe with MEK		
05/21/90	Coat with Brulin 835		
05/21/90	Coat with MZRB40		Brush
05/21/90	Coat with MARB		Brush
05/21/90	2 hr @ 487	O	Cure Cycle
05/21/90			Portion of Coating Delaminated off Substrate. Unclean Spot on Surface?
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6901-BR(C) Comments: Page 2

Materials: X-Rust Cleaner, MEK, Brulin 835, MZRB40, MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/04/90	3 hr @ 610	C	
06/04/90	30 min @ -100	C	
06/05/90	4 hr @ 160	H	
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	4 hr @ 600	C	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	Humid
06/15/90	30 min @ 150	H	Humid
06/18/90	30 min @ -100	C	
06/18/90	1 hr @ 600	C	
06/18/90	30 min @ -100	C	
06/19/90	6 hr @ 120	H	85-98% RH
06/20/90	6 hr @ 120	H	85-98% RH

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6901-BL(D) Comments:

Materials: X-Rust Cleaner, MEK, Brulin 835 Inhibitor, MZRB40, MARS

Equip Definitions: O - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Clean with X-Rust		
05/21/90	Glass Bead Blast		
05/21/90	Wipe with MEK		
05/21/90	Coat with Brulin 835		
05/21/90	Coat with MZRB40		Brush
05/21/90	Coat with MARS		Brush
05/21/90	2 hr @ 487	O	Cure Cycle
05/23/90	Test (Location 4)	A	50 psi (100% Substrate Adhesion) Coating Chips - Failure
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6901-BL(D) Comments: Page 2

Materials: X-Rust Cleaner, MEK, Brulin 835, MZRB40, MARS

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/04/90	3 hr @ 610	C	
06/04/90	30 min @ -100	C	
06/05/90	4 hr @ 160	H	
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	4 hr @ 600	C	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	Humid
06/15/90	30 min @ 150	H	Humid
06/18/90	30 min @ -100	C	
06/18/90	1 hr @ 600	C	
06/18/90	30 min @ -100	C	
06/19/90	6 hr @ 120	H	85-98% RH
06/20/90	6 hr @ 120	H	85-98% RH

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6902-TL(A) Comments:

Materials: VCI 421 Cleaner, MEK, Sheffield Red Hot Paint

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Clean with VCI 421		
05/21/90	Glass Bead Blast		
05/21/90	Wipe with MEK		
05/21/90	Coat with Red Hot		Brush
05/21/90	2 hr @ 487	O	Cure Cycle
05/23/90	Test (Location 8)	A	>610 psi (100% Epoxy Failure) No Test
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	
06/04/90	3 hr @ 610	C	
06/04/90	30 min @ -100	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6902-TL(A) Comments: Page 2

Materials: VCI 421 Cleaner, MEK, Sheffield Red Hot Aluminum Paint

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/05/90	4 hr @ 160	H	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6902-TR(B) Comments:

Materials: VCI 421 Cleaner, MEK, Sheffield Super Hot #326 Paint

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Clean with VCI 421		
05/21/90	Glass Bead Blast		
05/21/90	Wipe with MEK		
05/21/90	Coat with #326 Paint		Brush
05/21/90	2 hr @ 487	O	Cure Cycle
05/23/90	Test (Location 9)	A	>950 psi (No Failure)
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	Test (Location 11)	A	>900 psi (Epoxy Failure)
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	Test (Location 12)	A	650 psi (100% Cohesive)
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6902-TR(B) Comments: Page 2

Materials: VCI 421 Cleaner, MEK, Sheffield Red Hot #326 Aluminum Paint

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/04/90	3 hr @ 610	C	
06/04/90	30 min @ -100	C	
06/05/90	4 hr @ 160	H	
06/06/90	Test (Location 13)	A	>950 psi (No Failure)
06/08/90	Test (Location 13)	A	500 psi (50% Cohesive in Top Coat, 50% Epoxy Failure) Questionable Data

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6902-BR(C) Comments:

Materials: VCI 421 Cleaner, MEK, Sharp 104 Inhibitor, Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Clean with VCI 421		
05/21/90	Glass Bead Blast		
05/21/90	Wipe with MEK		
05/21/90	Coat With Sharp 104		Brush
05/21/90	Coat with MARB Paint		Brush
05/21/90	2 hr @ 487	O	Cure Cycle
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	
06/04/90	3 hr @ 610	C	
06/04/90	30 min @ -100	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16

Sample: 6902-BR(C)

Comments: Page 2

Materials: VCI 421 Cleaner, MEK, Sharp 104 Inhibitor, MARB Paint

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/05/90	4 hr @ 160	H	100% Coating Failure Over the Sharp 104

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6902-BL(D) Comments:

Materials: VCI 421 Cleaner, MEK, Sharp 104 Inhibitor, Standard MARS

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Clean with VCI 421		
05/21/90	Glass Bead Blast		
05/21/90	Wipe with MEK		
05/21/90	Coat With Sharp 104		Brush
05/21/90	Coat with MARS Paint		Brush
05/21/90	2 hr @ 487	O	Cure Cycle
05/23/90	Test (Location 10)	A	700 psi (60% Substrate, 40% Epoxy) Questionable Result
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	
06/04/90	3 hr @ 610	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6902-BL(D) Comments: Page 2

Materials: VCI 421 Cleaner, MEK, Sharp 104 Inhibitor, MARS Paint

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/04/90	30 min @ -100	C	
06/05/90	4 hr @ 160	H	
100% Coating Failure Over the Sharp 104			

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6903-Top Comments:

Materials: MEK, Sheffield Pot Belly Black

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Glass Bead Blast		
05/21/90	Wipe with MEK		
05/21/90	Coat with Pot Belly Paint	Brush	
05/23/90	Test (Location 13)	A	600 psi (70% Cohesive, 30% Epoxy) Questionable Result
05/29/90	Test (Location 14)	A	960 psi (100% Cohesive)
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	Test (Location 15)	A	650 psi (100% Cohesive)
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	
06/05/90	Test (Location 16)	A	>1000 psi (No Failure)
06/05/90	4 hr @ 160	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6903-Top Comments: Page 2

Materials: MEK, Sheffield Pot Belly Black Paint

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Test (Location 16)	A	>1000 psi (No Failure)
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	Test (Location 16)	A	500 psi (100% Cohesive)
06/14/90	4 hr @ 600	C	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	Humid
06/15/90	30 min @ 150	H	Humid
06/19/90	Test (Location 17)	A	450 psi (100% Cohesive)
06/19/90	6 hr @ 120	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6903-BR(C) Comments:

Materials: MEK, Sharp 104 Inhibitor, Sheffield Pot Belly Black

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Glass Bead Blast		
05/21/90	Wipe with MEK		
05/21/90	Coat with Sharp 104	Brush	
05/21/90	Coat with Pot Belly Paint	Brush	
05/23/90	Test	A	No Adhesion
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	
06/05/90	4 hr @ 160	H	
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	4 hr @ 600	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6903-BR(C) Comments: Page 2

Materials: MEK, Sharp 104 Inhibitor, Sheffield Pot Belly Black

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	Humid
06/15/90	30 min @ 150	H	Humid
06/19/90	6 hr @ 120	H	Humid

NRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6903-BL(D) Comments:

Materials: MEK, Brulin 835 Inhibitor, Sheffield Pot Belly Black

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Glass Bead Blast		
05/21/90	Wipe with MEK		
05/21/90	Coat with Brulin 835		Brush
05/21/90	Coat with Pot Belly Paint		Brush
05/29/90	2 hr @ 150	H	From dry to 100% RH
05/30/90	1 hr @ 600	O	
05/31/90	5 hr @ -100	C	
06/01/90	3 hr @ 160	H	Humid
06/01/90	20 min @ -25	H	
06/05/90	4 hr @ 160	H	
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	4 hr @ 600	C	
06/15/90	30 min @ 150	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 6903-BL(D) Comments:

Materials: MEK, Brulin 835 Inhibitor, Sheffield Pot Belly Black

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/15/90	30 min @ 15	H	Humid
06/15/90	30 min @ 150	H	Humid
06/19/90	6 hr @ 120	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 7001-Top

Comments:

Materials: Sharp 104 inhibitor

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Glass Bead Blast		
05/21/90	Coat with Sharp 104		Brush
05/29/90	2 hr @ 150	H	From dry to 100% RH No Change Observed
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	Humid
06/15/90	30 min @ 150	H	Humid, Little Rusting Evident
06/18/90	3 hr @ 600	O	
06/19/90	6 hr @ 120	H	Humid, Rusting Evident

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 7001-Center Comments:

Materials: Brulin 835 Inhibitor

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Glass Bead Blast		
05/21/90	Coat with Brulin 835		Brush
05/29/90	2 hr @ 150	H	From dry to 100% RH
			No Change Observed
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	Humid
06/15/90	30 min @ 150	H	Humid
06/18/90	3 hr @ 600	O	
06/19/90	6 hr @ 120	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 16 Sample: 7002-Top Comments:

Materials: MEK, IDA-KOTE Conversion Coat

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/21/90	Clean with MEK		
05/21/90	Coat with IDA-KOTE	Brush	
05/23/90	Test (Location 14)	A	650 psi (100% Substrate at Rust)
05/23/90	Test (Location 17)	A	>900 psi (No Failure) This test is on corroded surface, no coatings!!!
05/29/90	2 hr @ 150	H	From dry to 100% RH

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17

Sample: 7101

Comments:

Materials: 50% HCl Acid, Brulin 835 Inhibitor, Zinc Clad II (AHK Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/26/90	Clean with HCl		
05/26/90	Wash with Water		
05/26/90	Coat with Brulin 835		Brush
05/26/90	Coat with Zinc Clad II		Brush, Cure 3 days at Ambient Conditions
05/29/90	Coat with MARB		Brush
05/29/90	2 hr @ 480	O	Cure
05/30/90	Test (Location 1)	A	450 psi (20% Cohesive Zn to MARB, 20% Substrate Adhesion)
05/30/90	4 hr @ 140	H	From dry to 98% RH
05/31/90	3 hr @ 600	O	
06/01/90	Test (Location 2)	A	350 psi (90% Zinc Clad Cohesive, 10% Zn/MARB Interface) Flaking
06/01/90	20 min @ -25	H	
06/01/90	3 hr @ 160	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17

Sample: 7102

Comments:

Materials: 50% HCl Acid, Brulin 835 Inhibitor, Zinc Clad II (AHK Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/26/90	Clean with HCl		
05/26/90	Wash with Water		
05/26/90	Wire Brush		
05/26/90	Coat with Brulin 835		Brush
05/26/90	Coat with Zinc Clad II		Brush
05/26/90	Coat with MARB		Brush
05/26/90	2 hr @ 487	O	Cure
05/30/90	Test (Location 1)	A	650 psi (60% Cohesive, 40% Substrate Adhesion)
05/30/90	4 hr @ 140	H	From dry to 98% RH
05/31/90	3 hr @ 600	O	
06/01/90	Test (Location 2)	A	750 psi (95% Zinc Clad/MARB, 5% Zinc/Substrate)
06/01/90	20 min @ -25	H	
06/01/90	3 hr @ 160	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17 Sample: 7102 Comments: Page 2

Materials: 50% HCl Acid, Brulin 835 Inhibitor, Zinc Clad II (AlK Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/05/90	4 hr @ 160	H	Humid
06/06/90	Test (Location 3)	A	490 psi (80% Coating/Primer Interface, 15% Cohesive in Zinc, 5% Adhesion)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17

Sample: 7201

Comments:

Materials: VCI-421 Cleaner, Brulin 835 Inhibitor, Zinc Clad II (AHK Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/26/90	Clean with VCI-421		
05/26/90	Wash with Water		
05/26/90	Wire Brush		
05/26/90	Coat with Brulin 835		Brush
05/26/90	Coat with Zinc Clad II		Brush
05/26/90	Coat with MARB		Brush
05/26/90	1 hr @ 487	O	Cure
05/30/90	Test (Location 1)	A	880 psi (85% Cohesive, 15% Substrate Adhesion)
05/30/90	4 hr @ 140	H	From dry to 98% RH
05/31/90	3 hr @ 600	O	
06/01/90	Test (Location 2)	A	550 psi (80% Zinc Clad/MARB, 20% Zinc/Substrate)
06/01/90	20 min @ -25	H	
06/01/90	3 hr @ 160	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17

Sample: 7201

Comments: Page 2

Materials: VCI-421 Cleaner, Brulin 835 Inhibitor, Zinc Clad II (AlK Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/05/90	4 hr @ 160	H	Humid
06/06/90	Test (Location 3)	A	400 psi (90% Coating/Primer Interface, 10% Cohesive in Zinc, 5% Adhesion)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17

Sample: 7202

Comments:

Materials: VCI-421 Cleaner, Zinc Clad II (AHK Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/26/90	Clean with VCI-421		
05/26/90	Wash with Water		
05/26/90	Coat with Zinc Clad II		Brush
05/26/90	Coat with MARB		Brush
05/26/90	1 hr @ 487	O	Cure
05/30/90	Test (Location 1)	A	>980 psi (No Failure)
05/30/90	4 hr @ 140	H	From dry to 98% RH
05/31/90	3 hr @ 600	O	
06/01/90	Test (Location 2)	A	>1000 psi (No Failure)
06/01/90	20 min @ -25	H	
06/01/90	3 hr @ 160	H	Humid
06/04/90	3 hr @ 610	C	
06/04/90	30 min @ -100	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17

Sample: 7202

Comments: Page 2

Materials: VCI-421 Cleaner, Zinc Clad II (AHK Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/06/90	Test (Location 3)	A	600 psi (98% Coating/Primer Interface, 2% Cohesive in Zinc)
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	Humid
06/15/90	30 min @ 150	H	Humid
06/18/90	3 hr @ 600	O	
06/19/90	6 hr 120	H	Humid
06/20/90	Test (Location 4)	A	> 1050 psi (No Failure)
06/20/90	6 hr @ 120	H	Humid
06/21/90	Test (Location 4)	A	450 psi (90% Cohesive)

NRC Fabrication/Conditioning/Test Form 90-1

Set: 17

Sample: 7301

Comments:

Materials: Brulin 835 Inhibitor, Zinc Clad II (AIK Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/26/90	Wire Brush		
05/26/90	Coat with Brulin 835		
05/26/90	Coat with Zinc Clad II		Brush
05/26/90	Coat with MARB		Brush
05/26/90	1 hr @ 487	O	Cure
05/30/90	Test (Location 1)	A	900 psi (90% Cohesive MARB to Zinc, 10% Substrate Adhesion)
05/30/90	4 hr @ 140	H	From dry to 98% RH
05/31/90	3 hr @ 600	O	
06/01/90	Test (Location 2)	A	830 psi (90% Cohesive MARB to Zinc, 10% Substrate Adhesion)
06/01/90	20 min @ -25	H	
06/01/90	3 hr @ 160	H	Humid
06/04/90	3 hr @ 610	C	
06/04/90	30 min @ -100	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17

Sample: 7301

Comments: Page 2

Materials: Brulin 835 Inhibitor, Zinc Clad II (AIK Mix), Standard MARB

Equip Definitions: O - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester

Date	Action	Equip	Results/Comments
06/06/90	Test (Location 3)	A	920 psi (70% Coating/Primer Interface, 30% Cohesive in Zinc)
06/26/90	Sent to AEDC		

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17

Sample: 7302

Comments:

Materials: MEK, Brulin 835 Inhibitor, Zinc Clad II (AHK Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/26/90	Wire Brush		
05/26/90	Wipe with MEK		
05/26/90	Coat with Brulin 835		
05/26/90	Coat with Zinc Clad II		Brush
05/26/90	Coat with MARB		Brush
05/26/90	1 hr @ 487	O	Cure
05/30/90	Test (Location 1)	A	430 psi (80% Cohesive, 20% MARB/Zinc Interface)
05/30/90	4 hr @ 140	H	From dry to 98% RH
05/31/90	3 hr @ 600	O	
06/01/90	Test (Location 2)	A	350 psi (30% Cohesive MARB to Zinc, 70% Zinc Cohesive)

NRC Fabrication/Conditioning/Test Form 90-1

Set: 17

Sample: 7401

Comments:

Materials: MEK, Sheffield Pot Belly Black, Brulin 835 Inhibitor, Zinc Clad II (ANK Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/26/90	Wire Brush		
05/26/90	MEK Wipe		
05/26/90	Coat with Pot Belly Black		Brush
05/26/90	Wire Brush		
05/26/90	Coat with Brulin 835		Brush
05/26/90	Coat with Zinc Clad II		Brush
05/26/90	Coat with MARB		Brush
05/26/90	1 hr @ 487	O	Cure
05/30/90	Test (Location 1)	A	410 psi (75% Cohesive MARB to Zinc, 25% Cohesive)
05/30/90	4 hr @ 140	H	From dry to 98% RH
05/31/90	3 hr @ 600	O	
06/01/90	Test (Location 2)	A	650 psi (90% Zinc to Pot Belly, 10% Substrate Adhesion)
06/01/90	20 min @ -25	H	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17

Sample: 7401

Comments: Page 2

Materials: MEK, Sheffield Pot Belly Black, Brulin 835 Inhibitor, Zinc Clad II (AHK Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/01/90	3 hr @ 160	H	Humid
06/04/90	3 hr @ 610	C	
06/04/90	30 min @ -100	C	

NRC Fabrication/Conditioning/Test Form 90-1

Set: 17

Sample: 7402

Comments:

Materials: MEK, Sheffield Pot Belly Black, Brulin 835 Inhibitor, Zinc Clad II (AHK Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/25/90	Wire Brush		
05/25/90	MEK Wipe		
05/25/90	Coat with Pot Belly Black		Brush
05/25/90	Wire Brush		
05/25/90	Coat with Brulin 835		Brush
05/26/90	Wire Brush		
05/26/90	Coat with Zinc Clad II		Brush
05/29/90	Coat with MARB		Brush
05/29/90	1 hr @ 487	O	Cure
05/30/90	Test (Location 1)	A	720 psi (10% Cohesive Interface, 60% Cohesive, 30% Cohesive Pot Belly Black)
05/30/90	4 hr @ 140	H	From dry to 98% RH
05/31/90	3 hr @ 600	O	
06/01/90	Test (Location 2)	A	550 psi (95% Zinc to MARB, 5% Substrate Adhesion) Flaking

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17

Sample: 7402

Comments: Page 2

Materials: MEK, Sheffield Pot Belly Black, Brulin 835 Inhibitor, Zinc Clad II (AHK Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/01/90	20 min @ -25	H	
06/01/90	3 hr @ 160	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17

Sample: 7501

Comments:

Materials: MEK, Sheffield Pot Belly Black, Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/25/90	Wire Brush		
05/25/90	MEK Wipe		
05/25/90	Coat with Pot Belly Black	Brush	
05/26/90	Coat with MARB	Brush	
05/26/90	1 hr @ 487	O	Cure
05/30/90	Test (Location 1)	A	660 psi (100% Cohesive)
05/30/90	4 hr @ 140	H	From dry to 98% RH
05/31/90	3 hr @ 600	O	
06/01/90	Test (Location 2)	A	>1000 psi (No Failure)
06/01/90	20 min @ -25	H	
06/01/90	3 hr @ 160	H	Humid
06/04/90	3 hr @ 610	C	
06/04/90	30 min @ -100	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17 Sample: 7501

Comments: Page 2

Materials: MEK, Sheffield Pot Belly Black, Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/06/90	Test (Location 3)	A	300 psi (100% Cohesive in Pot Belly)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17

Sample: 7502

Comments:

Materials: MEK, Sheffield Pot Belly Black, Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/26/90	Wire Brush		
05/26/90	MEK Wipe		
05/26/90	Coat with Pot Belly Black		Brush
05/26/90	1 h @ 350	O	Dry Pot Belly Black
05/26/90	Wire Brush		
05/26/90	Coat with Pot Belly Black		Brush
05/26/90	1 h @ 350	O	Dry Pot Belly Black
05/26/90	Coat with MARB		Brush
05/26/90	1 hr @ 487	O	Cure
05/30/90	Test (Location 1)	A	820 psi (95% Cohesive, 5% Pot to Substrate)
05/30/90	4 hr @ 140	H	From dry to 98% RH
05/31/90	3 hr @ 600	O	
06/01/90	Test (Location 2)	A	>530 psi (90% Pot Belly, 10% Pot Belly/MARB Interface)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17 Sample: 7502 Comments: Page 2

Materials: MEK, Sheffield Pot Belly Black, Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/01/90	20 min @ -25	H	
06/01/90	3 hr @ 160	H	Humid
06/08/90	Test (Location 3)	A	420 psi (95% Pot Belly Cohesive, 5% MARB Cohesive)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17a

Sample: 7/03

Comments:

Materials: 50% HCl Acid, Brulin 835 Inhibitor, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/06/90	HCl Clean		
06/06/90	Wash with Water		Contains Sodium Bicarbonate
06/06/90	Coat with Brulin 835		Brush
06/06/90	Coat with Zinc Clad		Brush
06/06/90	Coat with MARB		Brush
06/06/90	2 hr @ 480	O	Cure
06/08/90	Test (Location 1)	A	510 psi (90% Adhesion, 10% Cohesive)
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	Test (Location 2)	A	650 psi (90% Adhesion, 10% Cohesive)
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	Test (Location 3)	A	950 psi (90% Adhesion, 10% Cohesive)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17a Sample: 7103

Comments: Page 2

Materials: 50% HCl Acid, Brulin 835 Inhibitor, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/18/90	30 min @ -100	C	
06/18/90	1 hr @ 650	C	
06/18/90	30 min @ -100	C	
06/18/90	6 hr @ 120	H	Humid
06/20/90	Test (Location 4)	A	920 psi (90% Zinc Cohesive, 10% Interface)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17a

Sample: 7/04

Comments:

Materials: 50% HCl Acid, Brulin 835 Inhibitor, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/01/90	HCl Clean		
06/01/90	Wash with Water		Contains Sodium Bicarbonate
06/01/90	Wire Brush		
06/01/90	Coat with Brulin 835		Brush
06/04/90	Coat with Zinc Clad		Brush
06/06/90	Coat with MARB		Brush
06/06/90	2 hr @ 480	O	Cure
06/08/90	Test (Location 1)	A	280 psi (95% Zinc Cohesive)

NRC Fabrication/Conditioning/Test Form 90-1

Set: 17a

Sample: 7203

Comments:

Materials: VCI-421 Cleaner, Brulin 835 Inhibitor, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/01/90	Clean with VCI-421		
06/01/90	Wash with Water		Contains Sodium Bicarbonate
06/01/90	Coat with Brulin 835		Brush
06/04/90	Coat with Zinc Clad		Brush
06/06/90	Coat with MARB		Brush
06/06/90	2 hr @ 480	O	Cure
06/08/90	Test (Location 1)	A	500 psi (80% Zinc Cohesive, 20% MARB Cohesive)
06/18/90	3 hr @ 600	O	
06/19/90	6 hr @ 120	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17a

Sample: 7204

Comments:

Materials: VCI-421 Cleaner, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/01/90	Clean with VCI-421		
06/01/90	Wash with Water		Contains Sodium Bicarbonate
06/04/90	Coat with Zinc Clad		Brush
06/06/90	Coat with MARB		Brush
06/06/90	2 hr @ 480	O	Cure
06/08/90	Test (Location 1)	A	450 psi (80% Adhesion, 20% Cohesive)
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	Test (Location 2)	A	750 psi (60% Zinc Cohesive, 40% MARB Cohesive)
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	Test (Location 3)	A	600 psi (80% Zinc Cohesive, 20% Interface)
06/18/90	3 hr @ 600	O	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17a Sample: 7204

Comments: Page 2

Materials: VCI-421 Cleaner, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/19/90	6 hr @ 120	H	Humid
06/20/90	Test (Location 4)	A	760 psi (90% Zinc Cohesive, 10% Interface)
06/20/90	6 hr @ 120	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17a Sample: 7303 Comments:

Materials: MEK, Brulin 835 Inhibitor, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/01/90	Wire Brush		
06/01/90	Wipe with MEK		
06/01/90	Coat with Brulin 835		Brush
06/04/90	Coat with Zinc Clad		Brush
06/06/90	Coat with MARB		Brush
06/06/90	2 hr @ 480	O	Cure
06/08/90	Test (Location 1)	A	410 psi (30% Adhesion, 40% MARB Cohesive, 30 Zinc Cohesive)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17a

Sample: 7304

Comments:

Materials: MEK, Brulin 835 Inhibitor, Sherwin-Williams Zinc Clad II (CDM Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/01/90	Wire Brush		
06/01/90	Wipe with MEK		
06/01/90	Coat with Brulin 835		Brush
06/04/90	Wire Brush		
06/06/90	Coat with Zinc Clad		Brush
06/06/90	Coat with MARB		Brush
06/06/90	2 hr @ 480	O	Cure
06/08/90	Test (Location 1)	A	900 psi (85% Adhesion, 15%)
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	Test (Location 2)	A	950 psi (No Failure)
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17a Sample: 7304

Comments: Page 2

Materials: MEK, Brulin 835 Inhibitor, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/18/90	Test (Location 3)	A	720 psi (20% Zinc Cohesive, 80% Adhesion)
06/18/90	3 hr @ 600	O	
06/19/90	6 hr @ 120	H	Humid
06/20/90	Test (Location 4)	A	950 psi (90% Zinc Cohesive, 10% Interface)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17a Sample: 7403

Comments:

Materials: MEK, Sheffield Pot Belly Black, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/06/90	Wire Brush		
06/06/90	Wipe with MEK		
06/06/90	Pot Belly Black		Brush
06/06/90	Wire Brush		
06/06/90	Coat with Zinc Clad		Brush
06/06/90	Coat with MARB		Brush
06/06/90	2 hr @ 480	O	Cure
06/08/90	Test (Location 1)	A	480 psi (85% Zinc Cohesive, 15% MARB Cohesive)
			Pot Belly Black did not come off with wire brushing

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17a

Sample: 7404

Comments:

Materials: MEK, Sheffield Pot Belly Black, Brulin 835 Inhibitor, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/01/90	Wire Brush		
06/01/90	Wipe with MEK		
06/01/90	Pot Belly Black		Brush
06/01/90	1 hr @ 350		Bake Pot Belly Black
06/01/90	Wire Brush		
06/01/90	Coat with Brulin 835		Brush
06/04/90	Wire Brush		
06/04/90	Coat with Zinc Clad		Brush
06/06/90	Coat with MARB		Brush
06/06/90	2 hr @ 480	O	Cure
06/08/90	Test (Location 1)	A	510 psi (40% Zinc Cohesive, 60% MARB Cohesive)
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	Test (Location 2)	A	1050 psi (90% Zinc Cohesive, 10% Coating Cohesive)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17a Sample: 7404

Comments: Page 2

Materials: MEK, Sheffield Pot Belly Black, Brulin 835 Inhibitor, Sherwin-Williams Zinc Clad II (CDN Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	Test (Location 3)	A	750 psi (60% Zinc Cohesive, 40% Coating Cohesive)
06/18/90	3 hr @ 600	O	
06/19/90	6 hr @ 120	H	Humid
06/20/90	Test (Location 4)	A	780 psi (80% Zinc Cohesive, 20% Epoxy)
06/20/90	30 min @ -110	C	
06/20/90	1 hr @ 610	C	
06/20/90	30 min @ -110	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17b

Sample: 7601

Comments:

Materials: MEK, Nybco Bar-B-Q Black, Brulin 835 Inhibitor, Sherwin-Williams Zinc-Clad II (AKH Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/31/90	MEK Wipe		
05/31/90	Wire Brush		
05/31/90	MEK Wipe		
05/31/90	Coat with Bar-B-Q Black		Spray
05/31/90	1 h @ 350	O	Dry Bar-B-Q Black
05/31/90	Wire Brush		
05/31/90	Coat with Brulin 835		Brush
05/31/90	1 h @ 212	O	Dry Brulin 835
05/31/90	Coat with Zinc Clad II		Brush
05/31/90	Coat with MARB		Brush
05/31/90	1 hr @ 487	O	Cure
06/05/90	4 hr @ 160	H	Humid
06/06/90	Test (Location 1)	A	580 psi (60% Zinc Clad Cohesive, 40% MARB Cohesive)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17b

Sample: 7602

Comments:

Materials: MEK, Nybco Bar-B-Q Black, Brulin 835 Inhibitor, Sherwin-Williams Zinc-Clad II (AKH Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/31/90	MEK Wipe		
05/31/90	Wire Brush		
05/31/90	MEK Wipe		
05/31/90	Coat with Bar-B-Q Black		Spray
05/31/90	1 h @ 350	O	Dry Bar-B-Q Black
05/31/90	Wire Brush		
05/31/90	Coat with Brulin 835		Brush
05/31/90	30 min @ 212	O	Dry Brulin 835
05/31/90	Wire Brush		
05/31/90	Coat with Zinc Clad II		Brush
05/31/90	Coat with MARB		Brush
05/31/90	1 hr @ 480	O	Cure
06/05/90	4 hr @ 160	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1**Set: 17b Sample: 7602****Comments: Page 2****Materials: MEK, Mybco Bar-B-Q Black, Brulin 835 Inhibitor, Sherwin-Williams Zinc-Clad II (AKII Mix), Standard MARB****Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester**

Date	Action	Equip	Results/Comments
06/06/90	Test (Location 1)	A	310 psi (90% Zinc Clad Cohesive, 5% MARB Cohesive, 5% Bar-B-Q Cohesive)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17b Sample: 7701 Comments:

Materials: MEK, Mybco Bar-B-Q Black, Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/31/90	MEK Wipe		
05/31/90	Wire Brush		
05/31/90	MEK Wipe		
05/31/90	Coat with Bar-B-Q Black		Spray
05/31/90	1 h @ 350	O	Dry Bar-B-Q Black
05/31/90	Coat with MARB		Brush
05/31/90	1 hr @ 480	O	Cure
06/05/90	4 hr @ 160	H	Humid
06/06/90	Test (Location 1)	A	400 psi (90% MARB Cohesive, 10% Bar-B-Q Cohesive)
06/08/90	Test (Location 2)	A	750 psi (95% MARB Cohesive, 5% Bar-B-Q Cohesive)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17b Sample: 7702 Comments:

Materials: MEK, Mybco Bar-B-Q Black, Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/31/90	MEK Wipe		
05/31/90	Wire Brush		
05/31/90	MEK Wipe		
05/31/90	Coat with Bar-B-Q Black		Spray
05/31/90	1 h @ 350	O	Dry Bar-B-Q Black
05/31/90	Wire Brush		
05/31/90	Coat with Bar-B-Q Black		Spray
05/31/90	1 h @ 350	O	Dry Bar-B-Q Black
05/31/90	Coat with MARB		Brush
05/31/90	1 hr @ 480	O	Cure
06/05/90	4 hr @ 160	H	Humid
06/06/90	Test (Location 1)	A	610 psi (90% MARB Cohesive, 10% Bar-B-Q Cohesive)
06/08/90	Test (Location 2)	A	700 psi (90% MARB Cohesive, 6% Substrate Adhesion, 4% Epoxy)

NRC Fabrication/Conditioning/Test Form 90-1

Set: 17b

Sample: 7801

Comments:

Materials: MEK, Neutra-Rust Conversion Coat, Brulin 835 Inhibitor, Sherwin-Williams Zinc-Clad II (AKH Mix), Standard MA

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/31/90	MEK Wipe		
05/31/90	Wire Brush		
05/31/90	MEK Wipe		
05/31/90	Coat with Neutra-Rust		Brush
05/31/90	1 h @ 350	O	Dry Neutra-Rust
05/31/90	Wire Brush		
05/31/90	Coat with Brulin 835		Brush
05/31/90	Coat with Zinc Clad II		Brush
05/31/90	Coat with MARB		Brush
05/31/90	1 hr @ 480	O	Cure
06/05/90	4 hr @ 160	H	Humid
06/06/90	Test (Location 1)	A	100 psi (50% Zinc to Neutra-Rust, 30% Neutra-Rust Cohesive, 20% MARB Cohesi Material Flakes; Zinc Clad over Neutra-Rust is poor choice

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17b Sample: 7802 Comments:

Materials: MEK, Neutra-Rust Conversion Coat, Brulin 835 Inhibitor, Sherwin-Williams Zinc-Clad II (AKH Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/31/90	MEK Wipe		
05/31/90	Wire Brush		
05/31/90	MEK Wipe		
05/31/90	Coat with Neutra-Rust		Brush
05/31/90	1 h @ 350	O	Dry Neutra-Rust
05/31/90	Wire Brush		
05/31/90	Coat with Brulin 835		Brush
05/31/90	1 hr @ 212	O	Dry Brulin 835
05/31/90	Wire Brush		
05/31/90	Coat with Zinc Clad II		Brush
05/31/90	Coat with MARB		Brush
05/31/90	1 hr @ 480	O	Cure
06/05/90	4 hr @ 160	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17b

Sample: 7802

Comments: Page 2

Materials: MEK, Neutra-Rust Conversion Coat, Brulin 835 Inhibitor, Sherwin-Williams Zinc-Clad II (AKH Mix), Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/06/90	Test (Location 1)	A	320 psi (45% Zinc to Neutra-Rust, 50% Neutra-Rust Cohesive, 5% MARB Cohesive) Zinc Clad over Neutra-Rust is poor choice; Neutra-Rust does not wire brush of

NRC Fabrication/Conditioning/Test Form 90-1

Set: 17b

Sample: 7901

Comments:

Materials: MEK, Neutra-Rust Conversion Coat, Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/31/90	MEK Wipe		
05/31/90	Wire Brush		
05/31/90	MEK Wipe		
05/31/90	Coat with Neutra-Rust		Brush
05/31/90	Coat with MARB		Brush
05/31/90	1 hr @ 480	O	Cure
06/05/90	4 hr @ 160	H	Humid
06/06/90	Test (Location 1)	A	210 psi (30% Adhesion, 20% Neutra-Rust Cohesive, 50% MARB Cohesive)
			Blistered; Failed first test

MRC Fabrication/Conditioning/Test Form 90-1

Set: 17b

Sample: 7902

Comments:

Materials: MEK, Neutra-Rust Conversion Coat, Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
05/31/90	MEK Wipe		
05/31/90	Wire Brush		
05/31/90	MEK Wipe		
05/31/90	Coat with Neutra-Rust		Brush
05/31/90	Wire Brush		
05/31/90	Coat with Neutra-Rust		Brush
05/31/90	Coat with MARB		Brush
05/31/90	1 hr @ 480	O	Cure
06/05/90	4 hr @ 160	H	Humid
			Blistered, Flaked, Complete Failure

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18

Sample: 8001

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MARB (5.0 SR240, 5.0 Toluene, 10.0 DC6-2230, 10.0 Xylene, 7.4 MD 7100 A1, 0.15 ZnO)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with MARB		Brush
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	Test (Location 1)	A	800 psi (97% Epoxy, 3% Adhesion to Rusty Substrate)
06/14/90	4 hr @ 600	C	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	Test (Location 2)	A	600 psi (85% Adhesion, 15% Epoxy)
06/18/90	3 hr @ 600	O	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8001

Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MARB (5.0 SR240, 5.0 Toluene, 10.0 DC6-2230, 10.0 Xylene, 7.4 MD 7100 A1, 0.15 ZnO)

Equip Definitions: O - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester

Date	Action	Equip	Results/Comments
06/19/90	6 hr @ 120	H	Humid
06/20/90	Test (Location 4)	A	780 psi (80% Zinc Cohesive, 20% Epoxy)
06/20/90	30 min @ -110	C	
06/20/90	1 hr @ 610	C	
06/20/90	30 min @ -110	C	
06/20/90	Test (Location 3)	A	>1050 psi (No Failure)
06/26/90	Sent to AEDC		

MRC Fabrication/Conditioning/Test Form 9C-1

Set: 18

Sample: 8002

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MARS-2 (2.5 DC-805, 2.5 50% Xylene, DC6-2330, 12.5 Xylene, 13.5 MD 7100 Al, 0.15 ZnO)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with MARS-2		Brush
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	Test (Location 1)	A	600 psi (100% Epoxy)
06/14/90	4 hr @ 600	C	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	Test (Location 2)	A	>1050 psi (No Failure)
06/18/90	•30 min @ -100	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18

Sample: 8002

Comments: page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MARS-2 (2.5 DC-805, 2.5 50% Xylene, DC6-2330, 12.5 Xylene, 13.5 MD 7100 A1, 0.15 ZnO)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/18/90	1 hr @ 600	C	
06/18/90	30 min @ -100	C	
06/19/90	6 hr @ 120	H	Humid
06/20/90	Test (Location 3)	A	620 psi (20% Cohesive, 20% Epoxy, 60% Adhesion)
06/20/90	6 hrs @ 120	H	
07/09/90	Methylene Chloride		Clean MARS off (does not clean off)
07/14/90	Test (Location 4)	A	>1000 PSI
07/25/90	Test (Location 5)	A	>1000 PSI
07/25/90	20 hrs @ 130 F	H	wet to dry
07/26/90	1/2 hr @ 0 F	II	
07/26/90	24 hrs @ 130 F	II	
07/27/90	1/2 hr @ 10 F	H	
07/27/90	24 hrs @ 130 F	II	
07/30/90	Test (Location 6)	A	>1000 (80% C; 20% A-Substrate)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18

Sample: 8101(L)

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC ZS-1 (5.0 DC805, 5.0 50% Xylene, 10.0 DC6-2230, 10.0 50% Xylene, 13.5 #201 Zn Dust, 0.15 ZnO)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with ZS-1		Brush
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	4 hr @ 600	C	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	30 min @ -100	C	
06/18/90	1 hr @ 600	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18

Sample: 8101(L)

Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC ZS-1 (5.0 DC805, 5.0 50% Xylene, 10.0 DC6-2230, 10.0 50% Xylene, 13.5 #201 Zn Dust, 0.15 ZnO)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/18/90	30 min @ -100	C	
06/19/90	6 hr @ 120	H	Humid
06/20/90	Test (Location 3)	A	950 psi (100% Adhesive)
06/20/90	30 min @ -110	C	
06/20/90	1 hr @ 610	C	
06/20/90	30 min @ -110	C	
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/27/90	Sent to AEDC		

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18

Sample: 8101(C)

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC ZS-1 (5.0 DC805, 5.0 50% Xylene, 10.0 DC6-2230, 10.0 50% Xylene, 13.5 #201 Zn Dust, 0.15 ZnO), MRC ZS-2 (5.0 DC805, 5.0 50% Xylene, 10.0 DC6-2230, 10.0 50% Xylene, 7.4 #201 Zn Dust, 0.15 ZnO)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with ZS-2		Brush
06/12/90	Coat with ZS-1		Brush
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	Test (Location 1)	A	300 psi (90% Epoxy, 10% Cohesive)
06/14/90	4 hr @ 600	C	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	30 min @ -100	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18

Sample: 8101(C)

Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC ZS-1 (5.0 DC805, 5.0 50% Xylene, 10.0 DC6-2230, 10.0 50% Xylene, 13.5 #201 Zn Dust, 0.15 ZnO), MRC ZS-2 (5.0 DC805, 5.0 50% Xylene, 10.0 DC6-2230, 10.0 50% Xylene, 7.4 #201 Zn Dust, 0.15 ZnO)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/18/90	1 hr @ 600	C	
06/18/90	30 min @ -100	C	
06/19/90	6 hr @ 120	H	Humid
06/20/90	Test (Location 2)	A	580 psi (100% Adhesive)
06/20/90	30 min @ -110	C	
06/20/90	1 hr @ 610	C	
06/20/90	30 min @ -110	C	
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/27/90	Sent to AEDC		

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18

Sample: 8101(R)

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC ZS-2 (5.0 DC805, 5.0 50% Xylene, 10.0 DC6-2230, 10.0 50% Xylene, 7.4 #201 Zn Dust, 0.15 ZnO)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with ZS-2		Brush
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	4 hr @ 600	C	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	30 min @ -100	C	
06/18/90	1 hr @ 600	C	
06/18/90	30 min @ -100	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8101(R) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC ZS-2 (5.0 DC805, 5.0 50% Xylene, 10.0 DC6-2230, 10.0 50% Xylene, 7.4 #201 Zn Dust, 0.15 ZnO)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/19/90	6 hr @ 120	H	Humid
06/20/90	Test (Location 4)	A	800 psi (100% Adhesive)
06/20/90	30 min @ -110	C	
06/20/90	1 hr @ 610	C	
06/20/90	30 min @ -110	C	
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/27/90	Sent to AEDC		

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8201(Top) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Sheffield Red Hot Paint

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with Red Hot		Brush
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	Test (Location 1)	A	>1000 psi (No Failure)
06/14/90	4 hr @ 600	C	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	Test (Location 3)	A	>1050 psi (no Failure)
06/18/90	30 min @ -100	C	

NRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8201(Top) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Sheffield Red Hot Paint

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/18/90	1 hr @ 600	C	
06/18/90	30 min @ -100	C	
06/19/90	6 hr @ 120	H	Humid
06/20/90	Test (Location 5)	A	>1050 psi (100% Adhesive)
06/20/90	30 min @ -110	C	
06/20/90	1 hr @ 610	C	
06/20/90	30 min @ -110	C	
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/27/90	Sent to AEDC		

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8201(Bottom) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Sheffield #326 Paint

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with #326		Brush
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	Test (Location 2)	A	>1000 psi (No Failure)
06/14/90	4 hr @ 600	C	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	Test (Location 4)	A	>1050 psi (no Failure)
06/18/90	30 min @ -100	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8201(Bottom) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Sheffield #326 Paint

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/18/90	1 hr @ 600	C	
06/18/90	30 min @ -100	C	
06/19/90	6 hr @ 120	H	Humid
06/20/90	30 min @ -110	C	
06/20/90	1 hr @ 610	C	
06/20/90	30 min @ -110	C	
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/27/90	Sent to AEDC		

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18

Sample: 8301(LL)

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Nybco Bar-B-Q Black

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with Bar-B-Q		Spray
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	Test (Location 3)	A	1000 psi (90% Adhesion, 10% Cohesive, No Rust)
06/14/90	4 hr @ 600	C	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	Test (Location 4)	A	>1050 psi (no Failure)
06/18/90	30 min @ -100	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8301(LL) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Nybco Bar-B-Q Black

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/18/90	1 hr @ 600	C	
06/18/90	30 min @ -100	C	
06/19/90	6 hr @ 120	H	Humid
06/20/90	Test (Location 6)	A	1050 psi (100% Cohesive)
06/20/90	6 hr @ 120	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8301(LC) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Sheffield Pot Belly Black

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with Pot Belly		Brush
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	Test (Location 2)	A	>1000 psi
06/14/90	4 hr @ 600	C	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	Test (Location 5)	A	520 psi (90% Cohesive, 10% Epoxy)
06/18/90	30 min @ -100	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8301(LC) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Sheffield Pot Belly Black

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/18/90	1 hr @ 600	C	
06/18/90	30 min @ -100	C	
06/19/90	6 hr @ 120	H	Humid
06/20/90	6 hr @ 120	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8301(RC) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Neutra-Rust

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with Pot Belly		Brush
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	4 hr @ 600	C	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	30 min @ -100	C	
06/18/90	1 hr @ 600	C	
06/18/90	30 min @ -100	C	
06/19/90	6 hr @ 120	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8301(RC) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Neutra-Rust

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/20/90	6 hr @ 120	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8301(RR) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, IDA-Kote

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat with IDA-Kote		Brush
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	Test (Location 1)	A	300 psi (100% Adhesion - Rust)
06/14/90	4 hr @ 600	C	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	30 min @ -100	C	
06/18/90	1 hr @ 600	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8301(RR) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, IDA-Kote

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/18/90	30 min @ -100	C	
06/19/90	6 hr @ 120	H	Humid
06/20/90	6 hr @ 120	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8401(Side A) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MS-122

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/08/90	Wire Brush		
06/12/90	Wipe with MEK		
06/12/90	Coat MS-122		Spray
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	4 hr @ 600	C	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	Test (Location 2)	A	0 psi (100% Epoxy - Fluorocarbons Difficult to Bond to)
06/18/90	30 min @ -100	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8401(Side A) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, NEK, MS-122

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/18/90	1 hr @ 600	C	
06/18/90	30 min @ -100	C	
06/19/90	6 hr @ 120	H	Humid
06/20/90	Test (Location 3)	A	0 psi (100% Epoxy - No Bonding to Fluorocarbons)
06/20/90	6 hr @ 120	H	Humid
06/26/90	15 hrs @ 120-180	H	

MHC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8401(Side B-L) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MS-122

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/08/90	Wire Brush		
06/12/90	Wipe with MEK		
06/12/90	Coat MS-122		Spray
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	4 hr @ 600	C	
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	30 min @ -100	C	
06/18/90	1 hr @ 600	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8401(Side B-L) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MS-122

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/18/90	30 min @ -100	C	
06/19/90	6 hr @ 120	H	Humid
06/20/90	6 hr @ 120	H	Humid
06/26/90	15 hrs @ 120-180	H	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8401(Side B-R) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MS-122

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/12/90	Wipe with MEK		
06/12/90	Coat MS-122		Spray
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	Test (Location 1)	A	100 psi
06/14/90	4 hr @ 600	C	(100% Adhesion - Rusty Substrate)
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	30 min @ -100	C	
06/18/90	1 hr @ 600	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8401(Side B-R) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MS-122

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/18/90	30 min @ -100	C	
06/19/90	6 hr @ 120	H	Humid
06/20/90	6 hr @ 120	H	Humid
06/26/90	15 hrs @ 120-180	H	

NRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8402-TL(A) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, McLube 358 Mold Release

Equip Definitions: O - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/08/90	Wire Brush		
06/08/90	Wipe with MEK		
06/12/90	Coat with McLube 358		Brush
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	30 min @ -100	C	
06/18/90	Test (Location 2)	A	620 psi (100% Epoxy - Some Rusting)
06/18/90	3 hr @ 600	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8402-TL (A) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, McLube 358

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/19/90	6 hr @ 120	H	Humid
06/20/90	6 hr @ 120	H	Humid
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/26/90	15 hrs @ 120 - 180	H	Completely Rusted Panel

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8402-TR(B) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, McLube 358 Mold Release

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/08/90	Wipe with MEK		
06/12/90	Coat with McLube 358		Brush
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	Test (Location 1)	A	450 psi (100% Cohesive - some rusting)
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	30 min @ -100	C	
06/18/90	3 hr @ 600	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8402-TR (B) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, McLube 358

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/19/90	6 hr @ 120	H	Humid
06/20/90	6 hr @ 120	H	Humid
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/26/90	15 hrs @ 120 - 180	H	Completely Rusted Panel

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8402-BR(C) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, McLube 362 Mold Release

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/08/90	Wipe with MEK		
06/12/90	Coat with McLube 362		Brush
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	30 min @ -100	C	
06/18/90	3 hr @ 600	C	
06/19/90	6 hr @ 120	H	Humid
06/20/90	6 hr @ 120	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8402-BR(C) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, McLube 362 Mold Release

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/26/90	15 hrs @ 120 - 180	H	Completely Rusted Panel

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8402-BL(D) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, McLube 362 Mold Release

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/08/90	Wire Brush		
06/08/90	Wipe with MEK		
06/12/90	Coat with McLube 362		Brush
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	30 min @ -100	C	
06/18/90	3 hr @ 600	C	
06/19/90	6 hr @ 120	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8402-BL (D) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, McLube 362

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/20/90	Test (Location 3)	A	
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/26/90	15 hrs @ 120 - 180	H	Completely Rusted Panel

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8403-Top Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, Lubribond HT (Phenyl-Methyl Silicone/MoS₂)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/11/90	Coat with Lubribond		
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	3 hr @ 600	C	
06/19/90	6 hr @ 120	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8403-Bottom Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, Lubribond HT (Phenyl-Methyl Silicone/MoS₂)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/11/90	Coat with Lubribond		
06/11/90	Coat with Lubribond		
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	Test (Location 1)	A	900 psi (100% Cohesive, Rusting Appeared 6/15/90)
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	Test (Location 2)	A	920 psi (100% Cohesive, No Rusting Evident)
06/18/90	3 hr @ 600	C	
06/19/90	6 hr @ 120	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8404-Side A Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, Lubribond 320 (Fluorocarbon)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/11/90	Wipe with MEK		
06/11/90	Coat with Lubribond 320		
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/18/90	30 min @ -100	C	
06/18/90	1 hr @ 600	C	
06/18/90	30 min @ -100	C	
06/19/90	6 hr @ 120	H	85-98% RH

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8404-Side A Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, Lubribond 320 (Fluorocarbon)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/20/90	6 hr @ 120	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8404-Side B Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Lubribond 320 (Fluorocarbon)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/11/90	Wire Brush		
06/11/90	Wipe with MEK		
06/11/90	Coat with Lubribond 320		Brush
06/12/90	1 hr @ 487	O	Cure
06/13/90	3.5 hr @ 140	H	Humid
06/14/90	Test (Location 1)	A	>1050 psi (No Failure)
06/15/90	30 min @ 150	H	Humid
06/15/90	30 min @ 15	H	
06/15/90	30 min @ 150	H	Humid
06/15/90	Test (Location 1)	A	>1000 psi (No Failure)
06/18/90	Test (Location 1)	A	>1000 psi (No Failure)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18 Sample: 8404-Side B Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Lubribond 320 (Fluorocarbon)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/18/90	30 min @ -100	C	
06/18/90	1 hr @ 600	C	
06/18/90	30 min @ -100	C	
06/19/90	6 hr @ 120	H	85-98% RH
06/20/90	Test (Location 2)	A	1000 psi (100% Epoxy Failure)
06/20/90	6 hr @ 120	H	Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18

Sample: 8405

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Esnalube 382 (MoS₂ in Silicate Binder)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/18/90	Wire Brush		
06/18/90	Coat with Esnalube 382		Brush
06/19/90	6 hr @ 120	H	85-98% RH
06/20/90	Test (Location 1)	A	400 psi (70% Cohesive, 30% Adhesive)
06/20/90	6 hr @ 120	H	Humid - Rust, coating does not protect against moisture

MRC Fabrication/Conditioning/Test Form 90-1

Set: 18

Sample: 8406

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, Everlube 812 (MoS₂ in Silicate Binder)

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/18/90	Wire Brush		
06/18/90	Coat with Everlube 812		Brush
06/18/90	2 hr @ 150	O	Cure after 15 minutes ambient dry
06/18/90	2 hr @ 400	O	Cure
06/19/90	6 hr @ 120	H	85-98% RH
06/20/90	Test (Location 1)	A	1050 psi (No Failure)
06/20/90	6 hr @ 120	H	Humid - Rust, coating does not protect against moisture
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/26/90	15 hrs @ 120-180	H	Humid to Dry, Rusted Panel

NRC Fabrication/Conditioning/Test Form 90-1

Set: 19 Sample: 8500(L) Comments: Control Panel

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, NRC Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/25/90	Wipe with MEK		
06/25/90	Coat with MARB		Brush
06/25/90	1 hr @ 487	O	Cure
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/26/90	15 hrs @ 120-180	H	Humid to Dry
06/27/90	Test (Location 1)	A	>1050 psi (No Failure)
06/27/90	4 hrs @ 120	H	Very Humid
06/28/90	6 hr @ 130	H	
6/29/90	Test (Location 1)	A	>1050 (No Failure)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 19

Sample: 8500(L)

Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/29/90	2 hrs @ -120	C	
06/29/90	Test (Location 1)	A	0 psi (40% Adhesion, 30% Cohesion, 30% Epoxy) - No Test 3rd Pull @ 200 F
06/29/90	3 hrs @ 600	O	
07/02/90	5 hrs @ 140	H	
07/12/90	15 min @ -300	C	Extreme Cold
07/12/90	1 hr @ -100	C	
07/12/90	16 hrs @ 130	H	
07/13/90	2 hrs @ 620	O	
07/13/90	17 hrs @ 135	H	
07/16/90	4 hrs @ 620	O	
07/16/90	3 hrs @ 130 F	H	
07/19/90	test (location 3)	A	820 PSI (75% F; 25% C)
07/19/90	20 hrs @ 130 F	H	Very Humid

MRC Fabrication/Conditioning/Test Form 90-1

Set: 19 Sample: 8500(R) Comments: Control Panel

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MZRB47

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/25/90	Wipe with MEK		
06/25/90	Coat with MZRB47		Brush
06/25/90	1 hr @ 487	O	Cure
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/26/90	15 hrs @ 120-180	H	Humid to Dry
06/27/90	Test (Location 2)	A	>1050 psi (No Failure)
06/27/90	4 hrs @ 120	H	Very Humid
06/28/90	6 hr @ 130	H	
6/29/90	Test (Location 2)	A	>1050 (No Failure)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 19

Sample: 8500(R)

Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC M2RB47

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/29/90	2 hrs @ -120	C	
06/29/90	Test (Location 2)	A	0 psi (15% Adhesion, 10% Cohesion, 75% Epoxy) - No Test 3rd Pull
06/29/90	3 hrs @ 600	O	
07/02/90	5 hrs @ 140	H	
07/12/90	15 min @ -300	C	Extreme Cold
07/12/90	1 hr @ -100	C	
07/12/90	16 hrs @ 130	H	
07/13/90	2 hrs @ 620	O	
07/13/90	17 hrs @ 135	H	
07/16/90	4 hrs @ 620	O	
07/16/90	3 hrs @ 130 F	H	
07/19/90	test (location 4)	A	1050 PSI (90% F; 10% A)
07/19/90	20 hrs @ 130 F	H	Very Humid

NRC Fabrication/Conditioning/Test Form 90-1

Set: 19

Sample: 8500(R)

Comments: page 3

Materials: NZRB-47

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

[illegible]

MRC Fabrication/Conditioning/Test Form 90-1

Set: 19 Sample: 8501(L) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/24/90	Clean		ACS Surface Preparation 451-5 min
06/25/90	Coat with MARB		Brush
06/25/90	1 hr @ 487	O	Cure
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/26/90	Send to AEDC		

MRC Fabrication/Conditioning/Test Form 90-1

Set: 19

Sample: 8501(R)

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MZRB47

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/24/90	Clean		ACS Surface Preparation 451-5 min
06/25/90	Coat with MZRB47		Brush
06/25/90	1 hr @ 487	O	Cure
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/26/90	Send to AEDC		

MRC Fabrication/Conditioning/Test Form 90-1

Set: 19 Sample: 8502(L) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/25/90	Surface Preparation		ACS (452-5P-5 min)
06/25/90	Coat with MARB		Brush
06/25/90	1 hr @ 487	O	Cure
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/26/90	15 hrs @ 120-180	H	Humid to Dry
06/27/90	Test (Location 1)	A	>1050 psi (No Failure)
06/27/90	4 hrs @ 120	H	Very Humid
06/28/90	6 hr @ 130	H	
6/29/90	Test (Location 1)	A	>1050 (No Failure)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 19

Sample: 8502(L)

Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/29/90	2 hrs @ -120	C	
06/29/90	Test (Location 1)	A	150 psi (40% Adhesion, 40% Cohesion, 20% Epoxy) - No Test 3rd Pull
06/29/90	3 hrs @ 600	O	
07/02/90	5 hrs @ 140	H	
07/12/90	15 min @ -300	C	Extreme Cold
07/12/90	1 hr @ -100	C	
07/12/90	16 hrs @ 130	H	
07/13/90	2 hrs @ 620	O	
07/13/90	17 hrs @ 135	H	
07/16/90	4 hrs @ 620	O	
07/16/90	3 hrs @ 130 F	H	
07/19/90	test (location 3)	A	520 PSI (50% F; 30% C; 20% C; 5% dolly)
07/19/90	20 hrs @ 130 F	H	Very Humid

Comments: page 3

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

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MRC Fabrication/Conditioning/Test Form 90-1

Set: 19

Sample: 8502(R)

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MZRB47

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/25/90	Surface Preparation		ACS (452-5P-5 min)
06/25/90	Coat with MZRB47		Brush
06/25/90	1 hr @ 487	O	Cure
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/26/90	15 hrs @ 120-180	H	Humid to Dry
06/27/90	Test (Location 2)	A	>1050 psi (No Failure)
06/27/90	4 hrs @ 120	H	Very Humid
06/28/90	6 hr @ 130	H	
6/29/90	Test (Location 2)	A	>1050 (No Failure)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 19 Sample: 8502(R) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MZRB47

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/29/90	2 hrs @ -120	C	
06/29/90	Test (Location 2)	A	50 psi (10% Adhesion, 90% Epoxy) - No Test 3rd Pull
06/29/90	3 hrs @ 600	O	
07/02/90	5 hrs @ 140	H	
07/12/90	15 min @ -300	C	Extreme Cold
07/12/90	1 hr @ -100	C	
07/12/90	16 hrs @ 130	H	
07/13/90	2 hrs @ 620	O	
07/13/90	17 hrs @ 135	H	
07/16/90	4 hrs @ 620	O	
07/16/90	3 hrs @ 130 F	H	
07/19/90	test (location 4)	A	920 PSI (90% F; 10% dolly) pinhole
07/19/90	20 hrs @ 130 F	H	Very Humid

Comments: page 3

Equip Definitions: O - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester

[illegible]

MRC Fabrication/Conditioning/Test Form 90-1

Set: 19

Sample: 8503(L)

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/25/90	Surface Preparation		ACS (453-3P-1C-5 min)
06/25/90	Coat with MARB		Brush
06/25/90	1 hr @ 487	O	Cure
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/26/90	15 hrs @ 120-180	H	Humid to Dry
06/27/90	Test (Location 1)	A	>1050 psi (No Failure)
06/27/90	4 hrs @ 120	H	Very Humid
06/28/90	6 hr @ 130	H	
6/29/90	Test (Location 1)	A	>1050 (No Failure)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 19 Sample: 8503(L) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/29/90	2 hrs @ -120	C	
06/29/90	Test (Location 1)	A	50 psi (30% Adhesion, 20% Cohesion, 50% Epoxy) - No Test 3rd Pull
06/29/90	3 hrs @ 600	O	
07/02/90	5 hrs @ 140	H	
07/12/90	15 min @ -300	C	Extreme Cold
07/12/90	1 hr @ -100	C	
07/12/90	16 hrs @ 130	H	
07/13/90	2 hrs @ 620	O	
07/13/90	17 hrs @ 135	H	
07/16/90	4 hrs @ 620	O	
07/16/90	3 hrs @ 130 F	H	
07/19/90	test (location 3)	A	720 PSI (70% F; 30% C)
07/19/90	20 hrs @ 130 F	H	Very Humid

Comments: page 3

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

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MRC Fabrication/Conditioning/Test Form 90-1

Set: 19

Sample: 8503(R)

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MZRB47

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/25/90	Surface Preparation		ACS (453-3P-1C-5 min)
06/25/90	Coat with MZRB47		Brush
06/25/90	1 hr @ 487	O	Cure
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/26/90	15 hrs @ 120-180	H	Humid to Dry
06/27/90	Test (Location 2)	A	>1050 psi (No Failure)
06/27/90	4 hrs @ 120	H	Very Humid
06/28/90	6 hr @ 130	H	
6/29/90	Test (Location 2)	A	>1050 (No Failure)

Comments: page 3

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

[illegible]

MRC Fabrication/Conditioning/Test Form 90-1

Set: 19 Sample: 8504(L) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/25/90	Surface Preparation		ACS (454-10T-3P-5 min)
06/25/90	Coat with MARB		Brush
06/25/90	1 hr @ 487	O	Cure
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/26/90	15 hrs @ 120-180	H	Humid to Dry
06/27/90	Test (Location 1)	A	>1050 psi (No Failure)
06/27/90	4 hrs @ 120	H	Very Humid
06/28/90	6 hr @ 130	H	
6/29/90	Test (Location 1)	A	>1050 (No Failure)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 19 Sample: 8504(L) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/29/90	2 hrs @ -120	C	
06/29/90	Test (Location 1)	A	100 psi (30% Adhesion, 20% Cohesion, 50% Epoxy) - No Test 3rd Pull
06/29/90	3 hrs @ 600	O	
07/02/90	5 hrs @ 140	H	
07/12/90	15 min @ -300	C	Extreme Cold
07/12/90	1 hr @ -100	C	
07/12/90	16 hrs @ 130	H	
07/13/90	2 hrs @ 620	O	
07/13/90	17 hrs @ 135	H	
07/16/90	4 hrs @ 620	O	
07/16/90	3 hrs @ 130 F	H	
07/19/90	test (location 3)	A	1050 PSI (80% F; 10% C; 10% dolly)
07/19/90	20 hrs @ 130 F	H	Very Humid

Set: 19 Sample: 8504(L) Comments: page 3

Materials: MARB

Sample: 8504(L)

Comments: page 3

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

[illegible]

MRC Fabrication/Conditioning/Test Form 90-1

Set: 19

Sample: 8504(R)

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MZRB47

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/25/90	Surface Preparation		ACS (454-10T-3P-5 min)
06/25/90	Coat with MZRB47		Brush
06/25/90	1 hr @ 487	O	Cure
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/26/90	15 hrs @ 120-180	H	Humid to Dry
06/27/90	Test (Location 2)	A	>1050 psi (No Failure)
06/27/90	4 hrs @ 120	H	Very Humid
06/28/90	6 hr @ 130	H	
6/29/90	Test (Location 2)	A	>1050 (No Failure)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 19 Sample: 06C19-8504(R) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MZRB47

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/29/90	2 hrs @ -120	C	
06/29/90	Test (location 2)	A	150 psi (20% Adhesion, 30% Cohesion, 50% Epoxy) - No Test 3rd Pull
06/29/90	3 hrs @ 600	O	
07/02/90	5 hrs @ 140	H	
07/12/90	15 min @ -300	C	Extreme Cold
07/12/90	1 hr @ -100	C	
07/12/90	16 hrs @ 130	H	
07/13/90	2 hrs @ 620	O	
07/13/90	17 hrs @ 135	H	
07/16/90	4 hrs @ 620	O	
07/16/90	3 hrs @ 130 F	H	
07/19/90	test (location 4)	A	1050 PSI (90% F; 5% C; 5% dolly)
07/19/90	20 hrs @ 130 F	H	Very Humid

Comments: page 3

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

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MRC Fabrication/Conditioning/Test Form 90-1

Set: 19 Sample: 8505(L) Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/25/90	Surface Preparation		ACS (452-5P-10 min)
06/25/90	Coat with MARB		Brush
06/25/90	1 hr @ 487	O	Cure
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/26/90	15 hrs @ 120-180	H	Humid to Dry
06/27/90	Test (Location 1)	A	>1050 psi (No Failure)
06/27/90	4 hrs @ 120	H	Very Humid
06/28/90	6 hr @ 130	H	
6/29/90	Test (Location 1)	A	>1050 (No Failure)

NRC Fabrication/Conditioning/Test Form 90-1

Set: 19

Sample: 8505(L)

Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, NRC Standard MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/29/90	2 hrs @ -120	C	
06/29/90	Test (Location 1)	A	100 psi (15% Adhesion, 35% Cohesion, 30% Epoxy) - No Test 3rd Pull
06/29/90	3 hrs @ 600	O	
07/02/90	5 hrs @ 140	H	
07/12/90	15 min @ -300	C	Extreme Cold
07/12/90	1 hr @ -100	C	
07/12/90	16 hrs @ 130	H	
07/13/90	2 hrs @ 620	O	
07/13/90	17 hrs @ 135	H	
07/16/90	Test (Location 3)	A	>1050 psi (100% Epoxy Failure)
07/16/90	4 hrs @ 620	O	
07/16/90	3 hrs @ 130 F	H	
07/19/90	test (location 5)	A	1000 PSI (45% F; 50% C; 5% dolly)
07/19/90	20 hrs @ 130 F	H	Very Humid

Comments: page 3

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
07/20/90	5 hrs @ 140 F	H	Humid
07/25/90	20 hrs @ 130 F	H	Wet to dry
07/26/90	1/2 hr @ 0 F	H	
07/26/90	19 hrs @ 130 F	H	
07/27/90	1/2 hr @ 10 F	H	Humid
07/27/90	22 hrs @ 130 F	H	Humid
07/30/90	Test (Location 7)	A	1000 PSI (60% C; 40% F)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 19

Sample: 8505(R)

Comments:

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MZRB47

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/08/90	Acid Clean		Remove Mill Scale
06/08/90	Dip in NaHCO ₃		Neutralize, Dry
06/25/90	Surface Preparation		ACS (452-5P-10 min)
06/25/90	Coat with MZRB47		Brush
06/25/90	1 hr @ 487	O	Cure
06/26/90	1 hr @ -120	C	
06/26/90	1 hr @ 620	C	
06/26/90	1 hr @ -110	C	
06/26/90	15 hrs @ 120-180	H	Humid to Dry
06/27/90	Test (Location 2)	A	>1050 psi (No Failure)
06/27/90	4 hrs @ 120	H	Very Humid
06/28/90	6 hr @ 130	H	
6/29/90	Test (Location 2)	A	>1050 (No Failure)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 19 Sample: 8505(R) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MZRB47

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/29/90	2 hrs @ -120	C	
06/29/90	Test (Location 2)	A	100 psi (15% Adhesion, 25% Cohesion, 60% Epoxy) - No Test 3rd Pull
06/29/90	3 hrs @ 600	O	
07/02/90	5 hrs @ 140	H	
07/12/90	15 min @ -300	C	Extreme Cold
07/12/90	1 hr @ -100	C	
07/12/90	16 hrs @ 130	H	
07/13/90	2 hrs @ 620	O	
07/13/90	17 hrs @ 135	H	
07/16/90	Test (Location 4)	A	>1050 (No Failure)
07/16/90	4 hrs @ 620	O	
07/16/90	3 hrs @ 130 F	H	
07/19/90	test (location 6)	A	920 PSI (100% F)
07/19/90	20 hrs @ 130 F	H	Very Humid

Comments: page 3

Materials: MZRB-47

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

[illegible]

MRC Fabrication/Conditioning/Test Form 90-1

Set: 20

Sample: 8601

Comments: 1 dots

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
07/09/90	Acid clean	-	Remove mill scale, both sides of panel
07/25/90	Medium rusting	H	
08/16/90	Clean	-	Consultant gel both sides
08/16/90	Coat	-	Brush - thin MARB ^
08/17/90	Coat	-	Brush - thin topcoat MARB ^
08/20/90	1 hr @ 480 F	O	Oven cure Bake slowly
08/20/90	16 hrs @ 160 F	H	Humid
08/21/90	1 hr @ -100 F	C	Cold
08/21/90	16 hrs @ 120 F	H	Humid
08/22/90	1 hr @ -100 F	C	Autocycle cold
08/22/90	1 hr @ 600 F	C	Autocycle hot
08/22/90	15 hrs @ 125 F	H	Humid
08/23/90	1 hr @ -100 F	C	Autocycle cold

MRC Fabrication/Conditioning/Test Form 90-1

Set: 20

Sample: 8601

Comments: 1 dots, Page 2

Materials: MARB

Equip Definitions: O - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester

Date	Action	Equip	Results/Comments
08/23/90	1 hr @ 600 F	C	Autocycle hot Stroke, cracking, pinhole rust
08/23/90	15 hrs @ 125 F	H	
08/28/90	22 hrs @ 125 F	H	
08/29/90	5 hrs @ 600 F	O	
08/29/90	14 hrs @ 125 F	H	
08/30/90	4 hrs @ 600 F	O	
09/05/90	1 hr @ -100 F	C	
09/05/90	16 hrs @ 125 F	H	
09/06/90	3 hrs @ 600 F	O	
09/06/90	15 hrs @ 125 F	H	Humid to dry
09/07/90	1 hr @ -125 F	C	Autocycle
09/07/90	1 hr @ 800 F	C	Manual HIGH heat
09/11/90	1 hr @ -100 F	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 20

Sample: 8601

Comments: page 3

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
09/11/90	1 hr @ 590 F	C	
09/12/90	1 hr @ -100 F	C	
09/12/90	3 hrs @ 600 F	O	
09/12/90	16 hrs @ 125 F	H	
09/13/90	21 hrs @ 125 F	H	very humid
09/14/90	1 hr @ -100 F	C	
09/18/90	1 hr @ -100 F	C	
09/18/90	1 hr @ 600 F	O	
09/19/90	1 hr @ 15 F	H	
09/19/90	21 hrs @ 130 F	H	
09/20/90	Test (Location 1)	A	650 PSI (98% C)
09/24/90	3 hrs @ 600 F	O	
09/24/90	13 hrs @ 120 F	H	

Comments: page 4

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

[illegible]

NRC Fabrication/Conditioning/Test Form 90-1

Set: 20

Sample: 8602

Comments: 2 dots

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
07/09/90	Acid clean	-	Remove mill scale, both sides of panel
07/25/90	Medium rusting	H	
08/16/90	Clean	-	Consultant gel both sides
08/16/90	Coat	-	Brush - thin MARB ^
08/17/90	Coat	-	Brush - thin topcoat MARB <--> Too thick
08/20/90	1 hr @ 480 F	O	Oven cure Bake slowly
08/20/90	16 hrs @ 160 F	H	Humid
08/21/90	1 hr @ -100 F	C	Cold
08/21/90	16 hrs @ 120 F	H	Humid
08/22/90	1 hr @ -100 F	C	Autocycle cold
08/22/90	1 hr @ 600 F	C	Autocycle hot
08/22/90	15 hrs @ 125 F	H	Humid
08/23/90	1 hr @ -100 F	C	Autocycle cold undercoat rusting; debris

MRC Fabrication/Conditioning/Test Form 90-1

Set: 20 Sample: 8602

Comments: 2 dots, Page 2

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
08/23/90	1 hr @ 600 F	C	Autocycle hot
08/23/90	15 hrs @ 125 F	H	
08/28/90	22 hrs @ 125 F	H	
08/29/90	5 hrs @ 600 F	O	
08/29/90	14 hrs @ 125 F	H	
08/30/90	4 hrs @ 600 F	O	
09/05/90	1 hr @ -100 F	C	
09/05/90	16 hrs @ 125 F	H	
09/06/90	3 hrs @ 600 F	O	
09/06/90	15 hrs @ 125 F	H	Humid to dry
09/07/90	1 hr @ -125 F	C	Autocycle
09/07/90	1 hr @ 800 F	C	Manual HIGH heat
09/29/90	Test (Location 1)	A	400 PSI (100% C) Use panel for repair testing

MRC Fabrication/Conditioning/Test Form 90-1

Set: 20

Sample: 8603

Comments: 3 dots

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
07/09/90	Acid clean	-	Remove mill scale, both sides of panel
07/25/90	Medium rusting	H	
08/16/90	Clean	-	Consultant gel, both sides
08/16/90	Coat	-	Brush - thin MARB ^
08/17/90	Coat	-	Brush - thin topcoat MARB <-->
08/20/90	1 hr @ 480 F	O	Oven cure Bake slowly
08/20/90	16 hrs @ 160 F	H	Humid
08/21/90	1 hr @ -100 F	C	Cold
08/21/90	16 hrs @ 120 F	H	Humid
08/22/90	1 hr @ -100 F	C	Autocycle cold
08/22/90	1 hr @ 600 F	C	Autocycle hot
08/22/90	15 hrs @ 125 F	H	Humid
08/23/90	1 hr @ -100 F	C	Autocycle cold Brush stroke failures; rust debris

MRC Fabrication/Conditioning/Test Form 90-1

Set: 20

Sample: 8603

Comments: 3 dots, Page 2

Materials: MARB

Equip Definitions: O - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester

Date	Action	Equip	Results/Comments
08/23/90	1 hr @ 600 F	C	Autocycle hot
08/23/90	15 hrs @ 125 F	H	
08/28/90	22 hrs @ 125 F	H	
08/29/90	5 hrs @ 600 F	O	
08/29/90	14 hrs @ 125 F	H	
08/30/90	4 hrs @ 600 F	O	
09/05/90	1 hr @ -100 F	C	
09/05/90	16 hrs @ 125 F	H	
09/06/90	3 hrs @ 600 F	O	too thick; very little failure
09/06/90	15 hrs @ 125 F	H	Humid to dry
09/07/90	1 hr @ -125 F	C	Autocycle
09/07/90	1 hr @ 800 F	C	Manual HIGH heat
09/20/90	Test (Location 1)	A	550 PSI (100% C)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 20

Sample: 8603

Comments: page 3

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
09/24/90	3 hrs @ 600 F	O	
09/24/90	13 hrs @ 120 F	H	
09/25/90	1 hr @ 487 F	O	
09/25/90	16 hrs @ 120 F	H	
09/26/90	3 hrs @ 600 F	O	
09/27/90	40 hrs @ 120 F	H	
09/29/90	Test (Location 2)	A	320 PSI (90% C; 10%) Use panel for repair testing
11/08/90	89 hrs @ 140 F	H	very humid
01/14/91			See 9203 - cracking evident before coating removal

MRC Fabrication/Conditioning/Test Form 90-1

Set: 20

Sample: 8701

Comments: 4 dots

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
07/09/90	Acid clean	-	Remove mill scale, both sides of panel
07/25/90	Medium rusting	H	
08/16/90	Clean	-	Consultant gel, backside left rusty See Vufoil 1246.8g
08/16/90	Coat	-	Brush - thin MARB ^ 1248.0g
08/17/90	Coat	-	Brush - thin topcoat MARB <--> 1248.7g
08/20/90	1 hr @ 480 F	O	Oven cure Bake slowly
08/20/90	16 hrs @ 160 F	H	Humid
08/21/90	1 hr @ -100 F	C	Cold
08/21/90	16 hrs @ 120 F	H	Humid
08/22/90	1 hr @ -100 F	C	Autocycle cold
08/22/90	1 hr @ 600 F	C	Autocycle hot
08/22/90	15 hrs @ 125 F	H	Humid
08/23/90	1 hr @ -100 F	C	Autocycle cold Failures at vellum spots

MRC Fabrication/Conditioning/Test Form 90-1

Set: 20

Sample: 8701

Comments: 4 dots, Page 2

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
08/23/90	1 hr @ 600 F	C	Autocycle hot
08/23/90	15 hrs @ 125 F	H	
08/28/90	22 hrs @ 125 F	H	
08/29/90	5 hrs @ 600 F	O	
08/29/90	14 hrs @ 125 F	H	
08/30/90	4 hrs @ 600 F	O	
09/05/90	1 hr @ -100 F	C	
09/05/90	16 hrs @ 125 F	H	
09/06/90	3 hrs @ 600 F	O	
09/06/90	15 hrs @ 125 F	H	Humid to dry
09/07/90	1 hr @ -125 F	C	Autocycle
09/07/90	1 hr @ 800 F	C	Manual HIGH heat
09/11/90	1 hr @ -100 F	C	autocycle

MRC Fabrication/Conditioning/Test Form 90-1

Set: 20

Sample: 8701

Comments: page 3

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
09/11/90	1 hr @ 590 F	C	
09/12/90	1 hr @ -100 F	C	
09/12/90	3 hrs @ 600 F	O	
09/12/90	16 hrs @ 125 F	H	
09/13/90	21 hrs @ 125 F	H	very humid
09/14/90	1 hr @ -100 F	C	
09/18/90	1 hr @ -100 F	C	
09/18/90	1 hr @ 600 F	O	
09/18/90	1 hr @ 15 F	H	
09/19/90	21 hrs @ 130 F	H	
09/20/90	Test (Location 1)	A	350 PSI (100% C/I)
09/24/90	3 hrs @ 600 F	O	
09/24/90	13 hrs @ 120 F	H	

Comments: page 4

Sample: 8701

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

[illegible]

MRC Fabrication/Conditioning/Test Form 90-1

Set: 20

Sample: 8702

Comments: 5 dots

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
07/09/90	Acid clean	-	Remove mill scale, both sides of panel
07/25/90	Medium rusting	H	
08/16/90	Clean	-	Consultant gel, backside left rusty See Vufoil 1276.6g
08/16/90	Coat	-	Brush - thin MARB ^ 1277.5g
08/17/90	Coat	-	Brush - thin topcoat MARB <--> 1278.9g
08/20/90	1 hr @ 480 F	O	Oven cure Bake slowly
08/20/90	16 hrs @ 160 F	H	Humid
08/21/90	1 hr @ -100 F	C	Cold
08/21/90	16 hrs @ 120 F	H	Humid
08/22/90	1 hr @ -100 F	C	Autocycle cold
08/22/90	1 hr @ 600 F	C	Autocycle hot
08/22/90	15 hrs @ 125 F	H	Humid
08/23/90	1 hr @ -100 F	C	Autocycle cold Failures at vellum spots

MRC Fabrication/Conditioning/Test Form 90-1

Set: 20

Sample: 8702

Comments: 5 dots, Page 2

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
08/23/90	1 hr @ 600 F	C	Autocycle hot
08/23/90	15 hrs @ 125 F	H	
08/28/90	22 hrs @ 125 F	H	
08/29/90	5 hrs @ 600 F	O	
08/29/90	14 hrs @ 125 F	H	
08/30/90	4 hrs @ 600 F	O	
09/05/90	1 hr @ -100 F	C	
09/05/90	16 hrs @ 125 F	H	
09/06/90	3 hrs @ 600 F	O	
09/06/90	15 hrs @ 125 F	H	Humid to dry
09/07/90	1 hr @ -125 F	C	Autocycle
09/07/90	1 hr @ 800 F	C	Manual HIGH heat
09/07/90			Stop testing/ Failures at vellum spots
09/29/90	Test (Location 1)	A	500 PSI (100% C) Use panel for repair testing_ 9202

MRC Fabrication/Conditioning/Test Form 90-1

Set: 20

Sample: 8703

Comments: 0 dots

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
07/09/90	Acid clean	-	Remove mill scale, both sides of panel
07/25/90	Medium rusting	H	
08/16/90	Clean	-	Consultant gel, backside left rusty See Vufoil 1235.0g
08/16/90	Coat	-	Brush - thin MARB <--> 1236.2g
08/17/90	Coat	-	Brush - thin topcoat MARB <--> 1236.8g
08/20/90	1 hr @ 480 F	O	Oven cure Bake slowly
08/20/90	16 hrs @ 160 F	H	Humid
08/21/90	1 hr @ -100 F	C	Cold
08/21/90	16 hrs @ 120 F	H	Humid
08/22/90	1 hr @ -100 F	C	Autocycle cold
08/22/90	1 hr @ 600 F	C	Autocycle hot
08/22/90	15 hrs @ 125 F	H	Humid
08/23/90	1 hr @ -100 F	C	Autocycle cold Failures at vellum spots

NRC Fabrication/Conditioning/Test Form 90-1

Set: 20

Sample: 8703

Comments: 0 dots, Page 2

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
08/23/90	1 hr @ 600 F	C	Autocycle hot
08/23/90	15 hrs @ 125 F	H	
08/28/90	22 hrs @ 125 F	H	
08/29/90	5 hrs @ 600 F	O	
08/29/90	14 hrs @ 125 F	H	
08/30/90	4 hrs @ 600 F	O	
09/05/90	1 hr @ -100 F	C	
09/05/90	16 hrs @ 125 F	H	
09/06/90	3 hrs @ 600 F	O	
09/06/90	15 hrs @ 125 F	H	Humid to dry
09/07/90	1 hr @ -125 F	C	Autocycle
09/07/90	1 hr @ 800 F	C	Manual HIGH heat
09/20/90	Test (Location 1)	A	150 PSI (98% C/I)

Comments: 0 dots, Page 3

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

[illegible]

MRC Fabrication/Conditioning/Test Form 90-1

Set: 1-21

Sample: 8801

Comments:

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
07/03/90	Acid clean	-	Remove mill scale both sides of panel
07/06/90	Rusting	H	Mild
08/07/90	Clean	-	Glass Bead Etch
08/07/90	Coat	-	Brush two coats MARB <1 mil wet
08/08/90	1 hr @ 487 F	O	Slowly to cure
08/10/90	1 hr @ -110 F	C	Cold autocycle
08/10/90	1 hr @ 600 F	C	Hot autocycle
08/13/90	1 hr @ -100 F	C	Cold
08/14/90	1 hr @ -100 F	C	Cold autocycle
08/14/90	1/2 hr @ 600 F	C	Hot altered autocycle
08/16/90	5 hrs @ 140 F	H	Humid
08/17/90	1/2 hr @ 20 F	H	
08/17/90	3 hrs @ 130 F	H	

MRC Fabrication/Conditioning/Test Form 90-1

Set: I-21 Sample: 8801

Comments: Page 2

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
08/20/90	16 hrs @ 160 F	H	
08/21/90	1 hr @ -100 F	C	
08/21/90	16 hrs @ 120 F	H	
08/22/90	1 hr @ -100 F	C	
08/22/90	1 hr @ 600 F	C	
08/22/90	15 hrs 125 F	H	
08/23/90	1 hr @ -100 F	C	
08/23/90	1 hr @ 600 F	C	
08/23/90	15 hrs @ 125 F	H	
08/28/90	22 hrs @ 125 F	H	
08/29/90	5 hrs @ 600 F	O	
08/29/90	14 hrs @ 125 F	H	
08/30/90	4 hrs @ 600 F	O	

NRC Fabrication/Conditioning/Test Form 90-1

Set: 1-21 Sample: 8801

Comments: page 3

Materials: HARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

[illegible]

MRC Fabrication/Conditioning/Test Form 90-1

Set: I-21 Sample: 8802

Comments:

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
07/03/90	Acid clean	-	Remove mill scale both sides of panel
07/06/90	Rusting	H	Mild
08/07/90	Clean	-	Glass Bead Etch
08/07/90	Coat	-	Brush two coats MARB <1 mil wet
08/08/90	1 hr @ 487 F	O	Slowly to cure
08/10/90	1 hr @ -110 F	C	Cold autocycle
08/10/90	1 hr @ 600 F	C	Hot autocycle
08/13/90	1 hr @ -100 F	C	Cold
08/14/90	1 hr @ -100 F	C	Cold autocycle
08/14/90	1/2 hr @ 600 F	C	Hot altered autocycle
08/16/90	5 hrs @ 140 F	H	Humid
08/17/90	1/2 hr @ 20 F	H	
08/17/90	3 hrs @ 130 F	H	

MRC Fabrication/Conditioning/Test Form 90-1

Set: I-21

Sample: 8802

Comments: Page 2

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
08/20/90	16 hrs @ 160 F	H	
08/21/90	1 hr @ -100 F	C	
08/21/90	16 hrs @ 120 F	H	
08/22/90	1 hr @ -100 F	C	
08/22/90	1 hr @ 600 F	C	
08/22/90	15 hrs 125 F	H	
08/23/90	1 hr @ -100 F	C	
08/23/90	1 hr @ 600 F	C	
08/23/90	15 hrs @ 125 F	H	
08/28/90	22 hrs @ 125 F	H	
08/29/90	5 hrs @ 600 F	O	
08/29/90	14 hrs @ 125 F	H	
08/30/90	4 hrs @ 600 F	O	

Comments: page 3

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

228

MRC Fabrication/Conditioning/Test Form 90-1

Set: 1-21

Sample: 8803

Comments:

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
07/03/90	Acid clean	-	Remove mill scale both sides of panel
07/06/90	Rusting	H	Mild
08/07/90	Clean	-	Glass Bead Etch
08/07/90	Coat	-	Brush coat MARB <1 mil wet /2nd coat wipe on
08/08/90	1 hr @ 487 F	O	Slowly to cure
08/10/90	1 hr @ -110 F	C	Cold autocycle
08/10/90	1 hr @ 600 F	C	Hot autocycle
08/13/90	1 hr @ -100 F	C	Cold
08/14/90	1 hr @ -100 F	C	Cold autocycle
08/14/90	1/2 hr @ 600 F	C	Hot altered autocycle
08/16/90	5 hrs @ 140 F	H	Humid
08/17/90	1/2 hr @ 20 F	H	
08/17/90	3 hrs @ 130 F	H	

MRC Fabrication/Conditioning/Test Form 90-1

Set: I-21 Sample: 8803

Comments: Page 2

Materials: MARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
08/20/90	16 hrs @ 160 F	H	
08/21/90	1 hr @ -100 F	C	
08/21/90	16 hrs @ 120 F	H	
08/22/90	1 hr @ -100 F	C	
08/22/90	1 hr @ 600 F	C	
08/22/90	15 hrs 125 F	H	
08/23/90	1 hr @ -100 F	C	
08/23/90	1 hr @ 600 F	C	
08/23/90	15 hrs @ 125 F	H	
08/28/90	22 hrs @ 125 F	H	
08/29/90	5 hrs @ 600 F	O	
08/29/90	14 hrs @ 125 F	H	
08/30/90	4 hrs @ 600 F	O	

NRC Fabrication/Conditioning/Test Form 90-1

Set: I-21 Sample: 8803

Comments: page 3

Materials: HARB

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
09/05/90	1 hr @ -100 F	C	Autocycle
09/05/90	16 hrs @ 125 F	H	
09/06/90	3 hrs @ 600 F	O	
09/06/90	15 hrs @ 125 F	H	Humid to dry
09/07/90	1 hr @ -125 F	C	Autocycle
09/07/90	1 hr @ 800 F	C	Manual HIGH heat
09/20/90	Test (Location 1)	A	>1050 No Failure Knock off 100% C
09/24/90	3 hrs @ 600 F	O	
09/24/90	13 hrs @ 120 F	H	
09/25/90	1 hr @ 487 F	O	
09/25/90	16 hrs @ 120 F	H	
09/26/90	3 hrs @ 600 F	O	
09/27/90	40 hrs @ 120 F	H	

Comments: page 4

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

[illegible]

MRC Fabrication/Conditioning/Test Form 90-1

Set: I-21

Sample: 8901

Comments:

Materials: MZRB-80

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
07/03/90	Acid clean	-	Remove mill scale both sides of panel
07/06/90	Rusting	H	Mild
08/07/90	Clean	-	Consultant gel 11F3-10 min
08/07/90	Coat	-	Brush three thin coats MZRB-80
08/08/90	1 hr @ 487 F	O	Slowly to cure
08/10/90	1 hr @ -110 F	C	Cold autocycle
08/10/90	1 hr @ 600 F	C	Hot autocycle
08/13/90	1 hr @ -100 F	C	Cold
08/14/90	1 hr @ -100 F	C	Cold autocycle
08/14/90	1/2 hr @ 600 F	C	Hot altered autocycle
08/16/90	5 hrs @ 140 F	H	Humid
08/17/90	1/2 hr @ 20 F	H	
08/17/90	3 hrs @ 130 F	H	

MRC Fabrication/Conditioning/Test Form 90-1

Set: 1-21 Sample: 8901

Comments: Page 2

Materials: MZRB-80

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
08/20/90	16 hrs @ 160 F	H	
08/21/90	1 hr @ -100 F	C	
08/21/90	16 hrs @ 120 F	H	
08/22/90	1 hr @ -100 F	C	
08/22/90	1 hr @ 600 F	C	
08/22/90	15 hrs 125 F	H	
08/23/90	1 hr @ -100 F	C	
08/23/90	1 hr @ 600 F	C	
08/23/90	15 hrs @ 125 F	H	
08/28/90	22 hrs @ 125 F	H	
08/29/90	5 hrs @ 600 F	O	
08/29/90	14 hrs @ 125 F	H	
08/30/90	4 hrs @ 600 F	O	

Comments: page 3

Materials: MZRB-80

Equip Definitions: O - Oven; C - Heat/Cooling Chamber; H - Humidity Chamber; A - Adhesion Tester

[illegible]

NRC Fabrication/Conditioning/Test Form 90-1

Set: I-21 Sample: 8902

Comments:

Materials: MZRB-80

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
07/03/90	Acid clean	-	Remove mill scale both sides of panel
07/06/90	Rusting	H	Mild
08/07/90	Clean	-	Consultant gel 11F3-10 min
08/07/90	Coat	-	Brush three thin coats MZRB-80
08/08/90	1 hr @ 487 F	O	Slowly to cure
08/10/90	1 hr @ -110 F	C	Cold autocycle
08/10/90	1 hr @ 600 F	C	Hot autocycle
08/13/90	1 hr @ -100 F	C	Cold
08/14/90	1 hr @ -100 F	C	Cold autocycle
08/14/90	1/2 hr @ 600 F	C	Hot altered autocycle
08/16/90	5 hrs @ 140 F	H	Humid
08/17/90	1/2 hr @ 20 F	H	
08/17/90	3 hrs @ 130 F	H	

NRC Fabrication/Conditioning/Test Form 90-1

Set: I-21 Sample: 8902

Comments: Page 2

Materials: MZRB-80

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
08/20/90	16 hrs @ 160 F	H	
08/21/90	1 hr @ -100 F	C	
08/21/90	16 hrs @ 120 F	H	
08/22/90	1 hr @ -100 F	C	
08/22/90	1 hr @ 600 F	C	
08/22/90	15 hrs 125 F	H	
08/23/90	1 hr @ -100 F	C	
08/23/90	1 hr @ 600 F	C	
08/23/90	15 hrs @ 125 F	H	
08/28/90	22 hrs @ 125 F	H	
08/29/90	5 hrs @ 600 F	O	
08/29/90	14 hrs @ 125 F	H	
08/30/90	4 hrs @ 600 F	O	

Materials: NZRB-80

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[illegible]

NRC Fabrication/Conditioning/Test Form 90-1

Set: I-21 Sample: 8903

Comments:

Materials: MZRB-80

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
07/03/90	Acid clean	-	Remove mill scale both sides of panel
07/06/90	Rusting	H	Mild
08/07/90	Clean	-	Consultant gel 11F3-10 min
08/07/90	Coat	-	Brush three thin coats MZRB-80 Too thick
08/08/90	1 hr @ 487 F	O	Slowly to cure
08/10/90	1 hr @ -110 F	C	Cold autocycle
08/10/90	1 hr @ 600 F	C	Hot autocycle
08/13/90	1 hr @ -100 F	C	Cold
08/14/90	1 hr @ -100 F	C	Cold autocycle
08/14/90	1/2 hr @ 600 F	C	Hot altered autocycle
08/16/90	5 hrs @ 140 F	H	Humid
08/17/90	1/2 hr @ 20 F	H	
08/17/90	3 hrs @ 130 F	H	

NRC Fabrication/Conditioning/Test Form 90-1

Set: I-21

Sample: 8903

Comments: Page 2

Materials: MZRB-80

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
08/20/90	16 hrs @ 160 F	H	
08/21/90	1 hr @ -100 F	C	
08/21/90	16 hrs @ 120 F	H	
08/22/90	1 hr @ -100 F	C	
08/22/90	1 hr @ 600 F	C	
08/22/90	15 hrs 125 F	H	
08/23/90	1 hr @ -100 F	C	
08/23/90	1 hr @ 600 F	C	
08/23/90	15 hrs @ 125 F	H	
08/28/90	22 hrs @ 125 F	H	
08/29/90	5 hrs @ 600 F	O	
08/29/90	14 hrs @ 125 F	H	
08/30/90	4 hrs @ 600 F	O	

MRC Fabrication/Conditioning/Test Form 90-1

Set: I-21 Sample: 8903

Comments: page 3

Materials: MZRB-80

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
09/05/90	1 hr @ -100 F	C	Autocycle
09/05/90	16 hrs @ 125 F	H	
09/06/90	3 hrs @ 600 F	O	
09/06/90	15 hrs @ 125 F	H	Humid to dry
09/07/90	1 hr @ -125 F	C	Autocycle
09/07/90	1 hr @ 800 F	C	Manual HIGH heat
09/11/90	1 hr @ -100 F	C	
09/11/90	1 hr @ 590 F	C	
09/12/90	1 hr @ -100 F	C	
09/12/90	3 hrs @ 600 F	O	
09/12/90	16 hrs @ 125 F	H	
09/13/90	21 hrs @ 125 F	H	very humid
09/14/90	1 hr @ -100 F	C	

MRC Fabrication/Conditioning/Test Form 90-1

Set: I-21 Sample: 8903

Comments: page 4

Materials: MZRB-80

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
09/18/90	1 hr @ -100 F	C	
09/18/90	1 hr @ 600 F	O	
09/19/90	1 hr @ 15 F	H	
09/19/90	21 hrs @ 130 F	H	
09/20/90	Test (Location 1)	A	200 PSI (100% C/I)
09/24/90	3 hrs @ 600 F	O	
09/24/90	13 hrs @ 120 F	H	
09/25/90	1 hr @ 487 F	O	
09/25/90	16 hrs @ 120 F	H	
09/26/90	3 hrs @ 600 F	O	
09/27/90	40 hrs @ 120 F	H	
09/29/90	Test (Location 2)	A	170 PSI (100% C)
10/01/90	3.5 hrs @ 610 F	O	

NRC Fabrication/Conditioning/Test Form 90-1

Set: I-21 Sample: 8903

Comments: page 5

Materials: MZRB-80

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
10/01/90	16 hrs @ 120 F	H	
10/02/90	1 hr @ -100 F	C	
10/03/90	23 hrs @ 120/150 F	H	
10/04/90	1 hr @ -100 F	C	
10/04/90	15 hrs @ 120/160 F	H	
10/06/90	1 hr @ 487 F	O	
10/08/90	1 hr @ -100 F	C	
10/08/90	1 hr @ 600 F	C	
10/08/90	20 hrs @ 120 F	H	
10/09/90	1 hr @ -100 F	H	
10/10/90	Test (Location 3 C)	A	750 PSI (55% C; 45% F)
10/10/90	1 hr @ -100 F	C	cracked (no rust under thick coating)

MRC Fabrication/Conditioning/Test Form 90-1

Set: 19 Sample: 8503(R) Comments: Page 2

Materials: 50% HCl Acid, Sodium Bicarbonate, MEK, MRC MZRB47

Equip Definitions: O = Oven; C = Heat/Cooling Chamber; H = Humidity Chamber; A = Adhesion Tester

Date	Action	Equip	Results/Comments
06/29/90	2 hrs @ -120	C	
06/29/90	Test (Location 2)	A	100 psi (30% Adhesion, 30% Cohesion, 40% Epoxy) - No Test 3rd Pull
06/29/90	3 hrs @ 600	O	
07/02/90	5 hrs @ 140	H	
07/12/90	15 min @ -300	C	Extreme Cold
07/12/90	1 hr @ -100	C	
07/12/90	16 hrs @ 130	H	
07/13/90	2 hrs @ 620	O	
07/13/90	17 hrs @ 135	H	
07/16/90	4 hrs @ 620	O	
07/16/90	3 hrs @ 130 F	H	
07/19/90	test (location 4)	A	900 PSI (90% F; 5% C; 5% dolly)
07/19/90	20 hrs @ 130 F	H	Very Humid